

RELAPSE AMONG RECOVERING ADDICTION PROFESSIONALS:
PREVALENCE AND PREDICTORS

by

Dorothy Saxon Greene

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STATEMENT OF DISSERTATION APPROVAL

The following faculty members served as the supervisory committee chair and members for the dissertation of Dorothy Saxon Greene.

Dates at right indicate the members' approval of the dissertation.

Joanne Yaffe, Chair 07/15/2014
Date Approved

Robert Butters, Member 08/05/2014
Date Approved

Reiko Hayashi, Member 07/31/2014
Date Approved

Marie Huff, Member 07/15/2014
Date Approved

Albert Kopak, Member 07/15/2014
Date Approved

The dissertation has also been approved by Jannah H. Mather Dean of the
Department/School/College of Social Work and by David B. Kieda,
Dean of The Graduate School.

ABSTRACT

This dissertation examined the prevalence of relapse, as well as predictors of relapse, among a cross-section of recovering addiction professionals (RAPs) in the United States. Relapse is defined as any use of alcohol, illicit drugs, or nonprescribed prescription medication after the initiation of recovery. The research design was a cross-sectional, exploratory survey design. An internet-based, anonymous survey was used, and the sample was drawn from RAPs associated with the International Certification and Reciprocity Consortium, the largest addiction credentialing organization in the world. Results of univariate descriptive statistics, chi-square tests of independence, *t* tests, and logistic regression showed the following. An estimated 14.7% of RAPs relapsed over their career lifespan. There was no evidence of relationship between relapse and gender, race, or educational level. Lower likelihood and rates of relapse were associated with mutual aid group affiliation and attendance at meetings. RAPs who relapsed had shorter histories of sobriety at the start of their careers and shorter periods of sobriety while in recovery. Results suggest that professional supports for addiction professionals in recovery might be helpful.

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CHAPTER I

INTRODUCTION

The purpose of this dissertation research is to explore the prevalence of relapse among recovering addiction professionals in the United States, as well as to explore possible predictors of relapse unique to the recovering substance abuse workforce. This chapter will provide a statement of the problem, an overview of substance abuse and addiction, a discussion of the prevalence of relapse in the general population, as well as what is known regarding the determinants of relapse. The chapter will conclude with definitions of the key concepts, followed by a description of the organization of the dissertation.

Statement of the Problem

The literature about recovering addiction counselors in general is abundant. It includes articles exploring topics such as ethical issues (Doyle, 1997; St. Germaine, 1997; Toriello & Benschhoff, 2003), competency (Anderson & Wiemer, 1992), dual relationships (Hollander, Bauer, Herlihy & McCollum, 2006; Kaplan, 2005), pay differences (Olmstead, Johnson, Roman, & Sindelar, 2007), moral development (Sias, Lambie, & Foster, 2006), the effect of recovery status on treatment and therapeutic relationships (Machell, 1987), and comparisons between recovering and nonrecovering

staff (Chiu,1999; Crabb & Linton, 2007; Culbreth, 2000; McGovern & Armstrong, 1987; Pekka, 2010; Sias, Lambie, & Foster, 2006; Stöffelmayr, Mavis, Sherry, & Kasim, 1998; Toriello & Benshoff, 2003). Noticeably sparse, however, are empirical findings specific to relapse among recovering addiction professionals.

The field of alcohol and drug abuse counseling has a firmly rooted tradition of utilizing the recovering alcoholic or addict counselor, commonly termed the “lay counselor.” This tradition of *one alcoholic helping another* dates back to the late 18th century with Native American recovery circles (White, 2008). Currently, anywhere between 30% and 50% of addiction professionals in the U.S. are in recovery (Eby et al., 2009; Greene & Huff, 2010; Jones, Sells, & Reh fuss, 2009; White, 2009). However, 30 years ago, before the professionalization of the addiction treatment field took hold, the recovering professional represented closer to 70% of the workforce in substance abuse treatment settings. In treatment centers that implemented the Minnesota Model, nearly 100% of substance abuse counselors were in recovery (White, 2000b). The beginnings of the Minnesota Model of addiction treatment can be traced to Alcoholics Anonymous (AA; White, 1998). Eleven tenets are identified at its core, but its foundation is based on AA principles, the use of the recovering person as counselor, and the disease concept of alcoholism (White, 1998).

According to the American Society of Addiction Medicine (2011), addiction is a chronic, relapsing disease of the brain. Although the recovering substance abuse professional has been the subject of much scholarly debate and because the addiction treatment workforce has consisted mostly of those in recovery from the disorder, it is curious that so little has been written in peer reviewed forums relative to relapse among

recovering addiction professionals. In fact, only six scholarly articles were found on the topic (Adams & Warren, 2010; Doukas & Cullen, 2010; Jones et al., 2009; Kahn & Fua, 1992; Kinney, 1983; White, 1978). Of the six articles found specific to relapse among this population, only two had as their primary research question the prevalence of relapse among recovering addiction professionals (Jones et al., 2009; Kinney, 1983). Only four of the six were empirical studies; the other two included an opinion paper (Adams & Warren, 2010) and a literature review (Doukas & Cullen, 2010). Of the four empirical studies, two specifically examined the prevalence of relapse among recovering addiction professionals (Jones et al., 2009; Kinney, 1983). A third study evaluated an alcoholism counselor training program in Australia (Kahn & Fua, 1992), which had a relapse prevalence assessment embedded in its evaluation. The other study considered staff burnout as a predictor of relapse (White, 1978). But of those four studies, only one quantitative study (Jones et al., 2009) was rigorously designed, using power analyses and tests for reliability and validity.

There are large time gaps between the publication of the empirical studies that specifically assessed the relapse rate among addiction professionals, with the first gap being 9 years (Kahn & Fua, 1992; Kinney, 1983) and the second 17 years (Jones et al., 2009; Kahn & Fua, 1992). The first published study found a relapse rate among alcoholism counselors of 37.5% (Kinney, 1983). With this high relapse estimate and a substance abuse treatment workforce that consisted largely of people who themselves had a history of addiction, it is perplexing that the topic of relapse among recovering addiction professionals did not reemerge in the scholarly literature until 9 years later; and even then, the report was an Australian evaluative study that focused on a counselor

training program for Australian Aborigines (Kahn & Fau, 1992). It was not until 2009 that a more rigorous and systematically designed effort was published that specifically studied the prevalence of relapse among addiction counselors in the U.S. However, even this study was flawed most glaringly with an extremely low response rate of 4.5%.

With such a large recovering workforce, coupled with the fact that addiction often has a relapsing course (American Society of Addiction Medicine (ASAM), 2011), it is puzzling that an empirical literature on relapse among recovering addiction professionals is nearly absent. Even more alarming is that although the two most recent American studies were published 26 years apart, they both produced similar and concerning results—an approximately 38% rate of relapse among recovering addiction professionals. This statement should be interpreted as the rate reflecting the lifespan of the professional's career, rather than as 38% of recovering addiction professionals being in relapse at any given time (Jones et al., 2009; Kinney, 1983). Nonetheless, the implications are vast.

Overview of Substance Abuse

According to the Schneider Institute for Health Policy (2001), substance abuse is this country's number one public health issue and “causes more deaths, illnesses and disabilities ... than any other preventable health condition” (p. 6). For example, well over half (57%) of all fatal automobile accidents are associated with alcohol and/or drug impairment (Brady & Li, 2012). The Hepatitis C virus (HCV) is the leading cause of liver transplantation in the U.S. (U.S. Department of Health and Human Services [U.S. DHHS], 2010), and the leading cause of HCV is intravenous drug use (Center for Disease

Control [CDC], 2012a). As much as 25% of hospital beds are occupied by patients whose illness or injury is associated with substance abuse (Van Wormer & Davis, 2008) and in trauma units, at least 50% of cases are related to alcohol use (Substance Abuse and Mental Health Services Administration [SAMHSA], 2013, 2007). The number one cause of accidental fatal poisonings in 2009 was attributed to prescription drug overdose, and unintentional overdose was second only to automobile accidents as the leading cause of accidental injury in the U.S. (CDC, 2012b). Approximately 40% to 80% of child welfare cases involve substance abuse (Marsh & Smith, 2011; (National Council on Child Abuse and Family Violence [NCCAFV], 2012) and a substantial proportion of those under the supervision of the criminal justice system had crimes related to drug and alcohol abuse.

The relationship between substance abuse and crime is well documented. For instance, approximately 80% of women who are incarcerated have an alcohol or drug problem (National Institute on Drug Abuse [NIDA], 2009). Van Wormer and Davis (2013) estimated that 80% of those incarcerated had a substance abuse problem upon admission. Recreational drugs were used by 60% to 80% of those who had broken the law (Hartwell, 2004; McCollister & French, 2002), and 51% to 76% of men and 39% to 85% of women who were arrested tested positive for at least one illicit drug (Farabee, Prendergast & Cartier, 2002; Makkai & Payne, 2003). The Bureau of Criminal Justice Statistics (BJS) suggested that 53% of State and 45% of Federal prisoners met criteria for either substance dependence or abuse, as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychological Association [APA], 2000; NIDA, 2006). Further, 17% of State and 18% of Federal inmates stated that they committed their crimes to obtain money for drugs (BJS, 2004.).

The economic cost of substance abuse to society is substantial. Some estimates suggest that the cost of substance abuse in the U.S. is in excess of \$300 billion annually (NIDA, 2009), and approximately one-third of that, \$107.8 billion, are costs associated with the criminal justice system (NIDA, 2007). If tobacco is added to the mix, the annual cost rises to \$559 billion (NIDA, 2009). Lost productivity, however, is responsible for the majority of the economic costs of substance abuse to society (Office of National Drug Control Policy [ONDCP], 2004). Given the personal, biological and societal consequences of substance abuse, addiction has been viewed as the number one public health issue in our country (Center on Addiction and Substance Abuse [CASA], 2011; Royce & Strachley, 1996); (Southeast Addiction Technology Transfer Center [ATTC] n.d.).

Prevalence of Substance Abuse in General Population

In the general population, the rate of risky substance using behavior is alarming. For example, an estimated 30% of the population of people 12 years old and older engaged in risky alcohol use (defined as binge and heavy drinking) in the past 30 days, and in that same population, approximately 9% used an illicit substance in the previous 30 days (SAMHSA, 2010). Moreover, 16% of people 12 years old and over have addictive disorders (40 million), and an additional 80 million engage in high risk substance use (CASA, 2012). According to the National Survey on Drug Use and Health (NSDUH, 2011) nearly 22 million Americans were in need of substance abuse treatment, but only an estimated 10% received it.

Prevalence of Relapse in the General Population

Due to varied definitions of recovery, relapse, types of substances included in specific research projects, the population being studied, self-reporting biases, inclusion and exclusion criteria, and follow-up periods, determining a common estimate of the prevalence of relapse among those recovering from addictive disorders is difficult. For example, a 1988 survey of 59 recovering members of Alcoholics Anonymous included both sample selection biases and self-report biases (Sheeran, 1988). Only five specific AA groups were targeted for sampling, and members were recruited immediately following an AA meeting. Members both self-selected to participate and completed self-report questionnaires. Two surveys were eliminated due to “inconsistencies” in their reports, and 10 more were eliminated because respondents had not been involved in AA long enough; hence, the sample size was reduced to 47, and “long enough” was arbitrarily defined as 2 years. An additional methodological issue was that participants were divided into relapse and no relapse groups, with the no relapse group defined as maintaining abstinence for less than 2 years. Those who relapsed, but after 2 years, were still included in the no relapse group, underscoring problematic operationalization of variables in the research.

Using data from the National Epidemiological Survey on Alcohol and Related Conditions (NESARC), Dawson, Goldstein, and Grant (2007) conducted a more sophisticated study and one of the only studies to examine relapse within the context of both abstinent and nonabstinent remission. The first wave of the study identified 2109 people as having met DSM-IV criteria (American Psychiatric Association, 1994) for alcohol dependence, but who were currently in full remission. Type of remission was

divided into three groups: asymptomatic risk drinkers, low-risk drinkers, and abstainers. These categories were based on pattern and volume of alcohol use. Asymptomatic risk drinkers and low-risk drinkers still met criteria for full remission as abstinence is not a criterion for remission from an alcohol use disorder (AUD). Three years later, 1772 individuals were reinterviewed. Examining the relationship between remission status and relapse, this study found that 51.0% of asymptomatic drinkers experienced relapse to an AUD, 27.2% of low-risk drinkers experienced relapse, and 7.9% of abstainers experienced relapse.

In a large national study ($n = 1605$) of relapse among cocaine users, Simpson and associates (1999) showed that 23.5% of their sample had returned to weekly cocaine use in the year following treatment admission, and an additional 18% were readmitted for treatment. In their 5-year follow-up report, 26% of the participants reported weekly use, 26% had positive drug screens for cocaine, and 18% reported having been arrested in the follow-up period (Simpson et al., 1999). The 5-year mark tends to be an important time for sobriety, as not only evidenced by Simpson and colleagues (1999) but also in the National Treatment Outcomes Study (Gossop, Marsden, Stewart, & Kidd, 2003), which found that use of drugs such as heroin and benzodiazepines were significantly decreased and remained that way at the 4- to 5-year follow-up. Crack and powder cocaine use rates were not significantly different between admission and 4- to 5-year follow-up benchmarks.

Although risk for relapse significantly declines with time (Jin, Rourke, Patterson, Taylor, & Grant, 1998), the risk remains, even with long-term abstinence. Jin and associates (1998) followed 77 male alcoholics in long-term sobriety (defined as at least

18 months of abstinence) over a mean of 11 years to determine the hazard of relapse as well as the variables associated with relapse. Upon study enrollment, the average length of abstinence was 4.1 years. Participants were followed up every 2 years and classified as either relapsed or sober, dependent upon whether or not they had consumed an alcoholic beverage during the follow-up period. Twenty-four of the 77 participants (31%) relapsed during the follow-up period, and the average time from last drink to relapse was 6.1 years. Jin and associates (1998) found that during the first 5 years of follow-up there was an annual relapse risk of 3.8%, and over the following 6 years the hazard for relapse decreased to 2.6% annually. Jin and colleagues caution that even after 5 years of abstinence the relapse rates remain considerable, as 15% will relapse between 6 and 10 years of sobriety. After 5 years, however, the overall annual relapse risk declined from 3.8 % to 2.6%.

As one might surmise from the above, the definition of relapse in research on prevalence is complex and relapse rates vary widely, but it is evident that relapse is a common phenomenon with substance use disorders. In fact, relapse is so common that Vaillant (1988) found 95% of his sample relapsing within 2 years following treatment. One-hundred hospital-treated alcoholics and 100 heroin addicts were followed over 12 and 20 years, respectively, and both groups experienced a 95% rate of relapse within 2 years of hospital discharge. In the alcohol dependent group, stable abstinence was achieved in 24% of the sample at year 4, 32% at year 8, and 25% at year 12. Stable abstinence was achieved by 10% of the heroin-addicted sample at year 5, and 23% at year 10, and 35% were abstinent at year 18. This study underscores the high risk for relapse among people with addiction. In another study, Hunt, Barnett, and Branch (1971)

presented a survival curve, comparing tobacco, heroin, and alcohol relapse rates over the course of 1 year. Hunt and associates suggested that the curve should not be interpreted as “mathematically exact” but rather typical or illustrative. At 12 months posttreatment, relapse rates were 75% for heroin and tobacco users and 65% for those dependent on alcohol. When discussing the complexities of assessing relapse rates, Caron Pennsylvania (2012) sums it up best in that relapse estimates range between 50% and 90%. The wide range in relapse estimates is due, in part, to multiple variables such as the specific substance under investigation, time period of follow-up, treatment protocol, illness severity, psychopathology, family history, certain demographic variables, and the varied operationalizations of terms.

Given the high prevalence of relapse, it is important to examine factors that might be associated with relapse. I will examine research related to predictors of relapse in the following section.

Predictors of Relapse

Relapse predictors have been studied extensively, and it is important to identify the most common determinants in order to recognize those that may be unique to addiction professionals. The most common predictors of relapse are negative mood states, interpersonal conflicts, and social pressure to engage in alcohol and other drug (AOD) use. These three determinants account for three-fourths of relapses (Annis, 1990; Cummings, Gordon, & Marlatt, 1980). Moos and Moos (2006), Jin and colleagues (1998), Sanchez-Hervas et al. (2012), Festinger, Rubenstein, Marlowe, and Platt (2001), and Brownell, Marlatt, Lichtenstein, and Wilson (1986) all cited negative mood states,

such as depression, anger, and anxiety, to be predictive of relapse as well.

A second common predictor is interpersonal conflict or stressful interpersonal relationships. For example, Moos and Moos (2006) showed that decreased familial and social support increased the risk of relapse. Festinger et al. (2001) and Annis, Graham, and Davis (1987) also noted that high levels of interpersonal conflicts were predictive of relapse. Stressful social and family environments were also found to be predictive of relapse by Sanchez-Hervas et al. (2012).

One commonly cited predictor of relapse is social or peer pressure. When a person with an AOD problem is exposed to substances in their social environment and is encouraged by their peer and family groups to engage in use, their relapse risk is likely to increase (Annis et al., 1987; Annis, 1990; Cummings et al., 1980; Festinger et al. (2001); Havassy, Hall, & Wasserman, 1991; Marlatt & Gordon, 1985; Moos & Moos, 2006; Sanchez-Hervas et al., 2012).

Other relapse predictors or determinants have been identified, including physical discomfort (Annis et al., 1982; Festinger et al., 2001; Marlatt & Gordon, 1985), pleasant feelings and experiences (Annis et al., 1987; Marlatt & Gordon, 1985), and low self-efficacy (Annis, 1990; Bandura, 1978; Marlatt & Gordon, 1985; Sanchez-Hervas et al., 2012). Additionally, the severity of the AOD disorder has been linked to relapse—the more severe the disorder, the more likely one is to relapse (Jin et al., 1998; Moos & Moos, 2006; Sanchez-Hervas et al., 2012). Sociodemographic variables such as level of education and employment have also been found to be determinant of relapse. Those with lower levels of education and who are under- or unemployed are at greater risk of relapse (Jin et al., 1998; Moos & Moos, 2006; Sanchez-Hervas et al., 2012; Vaillant, 1988).

AOD cravings and cue exposure increase the risk for relapse (Annis et al., 1987; Festinger et al., 2001; Marlatt & Gordon, 1985; Sanchez-Hervas et al., 2012). An additional factor worth noting is coping style or lack of coping skills (Brownell et al., 1986; Festinger et al., 2001; Jin et al., 1998; Moos & Moos, 2006). Moos and Moos (2006) found that people who use alcohol as a means of tension reduction were at increased risk for relapse.

Two final factors that should be noted are motivation and positive family history for AOD disorders. Low motivation to change is a factor to consider relative to relapse risk (Brownell et al., 1986; Festinger et al., 2001). Finally, Jin and colleagues (1998) found that those with a positive family history of alcoholism were twice as likely to relapse as those who did not have such a family history.

In sum, the most frequently cited relapse predictors included negative mood, interpersonal conflict, including stressful social and family relationships, social pressure, physical discomfort, pleasant emotions and experiences, low self-efficacy, severity of AOD disorder, specific sociodemographic variables, cue exposure and craving, coping strategies, low motivation to remain abstinent, and having a positive family history for addiction.

At this juncture, it may be important to provide definitional clarification of terms for the current study as operationalizations are somewhat varied in the literature.

Definitions

Addiction Professional

Because the addictions field of practice has such an eclectic workforce, the term *addiction professional* is inclusive of social workers, counselors, psychologists, marriage and family therapists, medical professionals such as doctors and nurses, and lay counselors and technicians who work in the substance abuse treatment and prevention area. The substance abuse treatment field is truly an interdisciplinary one. Although not ideal for the most rigorous of research designs, the term addiction professional seems appropriate for the current project as it is an exploratory investigation into little known territory.

Addiction

In 2011, the American Society of Addiction Medicine (ASAM) released a policy statement that defined addiction:

Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors.

Addiction is characterized by inability to consistently abstain, impairment in behavioral control, craving, diminished recognition of significant problems with one's behaviors and interpersonal relationships, and a dysfunctional emotional response. Like other chronic diseases, addiction often involves cycles of relapse and remission. Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death. (para. 1, 2)

Although definitions of addiction have many common elements such as loss of control, continued use despite adverse consequences, relapse and craving, the dissertation will adopt the American Society of Addiction Medicine (ASAM, 2011) definition as it is

current and familiar to the addictions field.

Relapse

An entire discourse could be written about the definition of relapse and Miller (1996) articulates it best: “here we come to the edge of a vast ocean of complexity” (p. S21). Traditionally, relapse and recovery were binary concepts—one was either sober or in relapse. In the modern era of addiction science, the reinitiation of substance use after intentional recovery is often conceptualized along a continuum from lapse to relapse to the reactivation of addiction. Utilizing such a definition of relapse could prove to be problematic within a conceptual continuum. For example, is a lapse considered one sip, one drink, one drinking episode, 2 episodes? What constitutes a drinking episode: a day of binge drinking, 3 days a week? What constitutes a full-fledged relapse? Is it measured by the amount, type, or duration of substance use? And how does one differentiate between relapse and reactivation of addiction? This debate is beyond the scope of this dissertation and is meant only to underscore the complexities of the issue to which Miller (1996) alluded. Because there is no consensus on the definition, and it is important that selected measurement strategies be congruent with past operationalizations (Jones et al., 2009; Kahn & Fua, 1992; Kinney, 1983), this dissertation will use the following definition: Relapse is considered any use of alcohol, an illicit substance, or prescription medication used outside of the specified prescription after intentional recovery has been initiated. This last statement raises the issue of another ambiguous concept—recovery.

Recovery

The definition of recovery has varied widely over the past several years. For example, the Betty Ford Consensus Panel released its working definition of recovery in 2007 defined as “a voluntarily maintained lifestyle characterized by sobriety, personal health, and citizenship” (The Betty Ford Consensus Panel, 2007, p. 222). Since then, two additional conceptual models have been proposed. Dodge, Krantz, and Kenny (2010) introduced a definition that included seven domains: physical, biomarker, chemical dependency, psychological, psychiatric, family/social, and spiritual. Additionally, the Substance Abuse and Mental Health Services Administration (SAMHSA, 2012) introduced its working definition of recovery in 2011 and released a revised version in 2012. According to SAMHSA (2012), recovery is defined as “a process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential” (para 5). Similar to both the Betty Ford Consensus Panel (2007) and Dodge, Krantz, and Kenny (2010), the SAMHSA definition further delineates recovery into several dimensions: health, home, purpose, and community. For the purpose of this study, recovery will be restricted to sobriety, as further defined below.

Sobriety

Sobriety is defined here as total abstinence from alcohol, illicit drugs, and prescribed medications used outside the specified prescription parameters based on the initiation of recovery from an AOD disorder.

Long-term Sobriety

Since the standard in the field is that a recovering addiction professional should have at least 2 years of sobriety before being employed in a substance abuse treatment setting (Bissell, Fewell, & Jones, 1980; Bissell & Royce, 1987; Kinney, 1983; White, 2006), this benchmark was chosen for the purpose of this dissertation research.

Summary

Utilizing any of the above conceptual models in empirical research could be a complex and daunting task; hence, my decision to apply the more parsimonious definition of recovery as sobriety. For the purpose of the current study, a person in recovery is one who has intentionally ceased the use of alcohol, illicit drugs, and nonprescribed medications as a result of negative consequences of their use and who self-identifies as a person in recovery.

In the four chapters that follow, I will first provide an historical examination of the recovering substance abuse counselor and a review of the scholarly literature relative to recovering addiction professionals and relapse. Chapter III will outline the methodology for the dissertation research, including study design and data analysis strategies. Chapter IV will present the results of the study, and Chapter V will discuss the results in the context of study strengths, limitations, and implications for practice and research.

CHAPTER II

LITERATURE REVIEW

The following review of the literature will provide some insight into several aspects of the recovering addiction professional and relapse. The review begins with a brief history of the tradition of utilizing the recovering person as helper. Next, an overview of the prevalence data for recovering addiction professionals will be presented. The following two sections include a discourse on relapse in long-term recovery and relapse among recovering addiction professionals, including a critical analysis of research specific to relapse among recovering professionals. Because there is a relatively large literature specific to relapse among physicians, a brief examination of those findings will follow. Inherent to the problem of relapse among addiction professionals is a plethora of legal, ethical, and moral implications for both practice and policy; therefore, the chapter will conclude with a discussion of these issues and a justification for the current research.

Roots of the Recovering Alcoholic/Addict as Counselor

Until the past 2 decades, it was common practice to hire lay, or nonprofessional, substance abuse counselors with little or no education or training. Not infrequently, the counselor's only credential was that of being a sober member of a self-help organization, usually Alcoholics Anonymous or Narcotics Anonymous. William White is the addiction

field's premier historian, and he has discussed the history of the recovering lay counselor in detail; thus, the majority of the discussion that follows is derived from his work (White, 1998, 2000a, 2000b, 2004).

Mistakenly, many people believe that the tradition of using one alcoholic to help another began with the birth of Alcoholics Anonymous. According to White (1998), the tradition began as early as the 18th century with the Native American "recovery circles." In fact, the recovery movement among Native American populations has been in existence for approximately 250 years (Coyhis & White, 2002). The first of these, according to Coyhis and White (2002), were the Delaware Prophets, including Papounhan, Wangomend, Neolin, Scatttameck, and the Shawnee Prophet, Tenskawawa, who used their own recoveries from alcoholism to encourage abstinence in others as well as to inspire a return to ancestral roots. Reform societies began to surface in the early 1800s. One of the more well-known reform societies was the Washingtonian Total Abstinence Society. Washingtonian members were expected to pledge the following:

We, whose names are annexed, desirous of forming a society for mutual benefit, and to guard against a pernicious practice which is injurious to our health, standing and families, do pledge ourselves as gentlemen that we will not drink any spirituous or malt liquor, wine, or cider. (White, 1998, p.8)

As the Washingtonians' popularity faded, other temperance societies and reform clubs emerged from the temperance movement, including the Sons of Temperance, the Order of Good Samaritans, the United Order of Ex-Boozers, and the Drunkard's Club (White, 1998, 2006). Germane to each of these societies was the fundamental practice of trying to reform new recruits.

White (1998) gives an interesting historical progression of the lay therapist. He identified Courtney Baylor as the first recovered alcoholic to be employed as a lay

counselor in 1913. Baylor was a former patient of the Emmanuel Clinic, which had a common practice of recruiting former patients and then training them to provide therapy. When AA was founded in 1935, numerous service opportunities arose for the recovering alcoholic. Recovering alcoholics served as “sponsors” and held positions as doctors and nurses working at AA farms and AA wards (White, 1998).

By 1940, with the emergence of the Minnesota Model, the lay alcoholism counselor became commonplace. So popular was the Minnesota Model that by 1989, 95% of the treatment facilities in the United States followed this paradigm (van Wormer & Davis, 2008; White, 1998). Key tenets of the Minnesota Model include using the recovering alcoholic/addict as counselor, utilizing a less formal counseling approach that implements self-disclosure as a valid therapeutic technique, active working of AA’s 12 steps, and a belief that attending AA is the most effective way to maintain sobriety (White, 1998).

Other defining developments of the 20th century included Narcotics Anonymous (NA), methadone maintenance programs, and growing federal involvement in the treatment of addiction (White, 2000b). Substance abuse treatment agencies frequently recruited ex-addict staff from NA to use as counselors in methadone clinics. Further, two federal organizations, the Organization for Economic Opportunity (OEO) and the National Institute of Mental Health (NIMH) supported the integration of the recovering alcoholic as counselor into alcoholism treatment services they funded (White, 1998, 2000b). For example, OEO developed alcoholism training centers and integrated alcoholism services in over 200 community poverty programs, and NIMH began funding comprehensive community mental health programs, which included alcoholism treatment

services. Recovering alcoholics were commonly hired as counselors to assist alcoholic clients and families with access to medical and rehabilitative services. These lay alcoholic counselors worked on interdisciplinary teams with social workers, psychiatrists, and psychologists (White, 1998, 2000b).

In the 1960s and 1970s, therapeutic communities (TC) were in vogue for the treatment of drug addicts. This prototype was spawned by Charles Dederich, “a self-described frantic and fanatical Alcoholics Anonymous fellow” (White, 1998, p. 241). Dederich had an intergenerational history of alcoholism and was an alcoholic himself. Dederich’s TC, Synanon, has an interesting and tumultuous history (see White, 1998). As the TC began to treat more and more drug addicts, conflicts arose between the “alkies” and the “addicts.” As a result of this power struggle, Dederich discontinued treatment for alcoholics, severed ties with AA, and only provided care for drug addicts (White, 1998). Not only has it been a long held tradition in the alcoholism treatment field to employ workers who have had a personal history of alcoholism, but the same holds true for drug abuse treatment as well.

Two additional developments should be noted: the paraprofessional movement (which is currently reemerging: U.S. DHHS, 2009; White, 2009) and the implementation of the Hughes Act in 1970. The paraprofessional movement provided legitimacy to the recovered person as counselor (White, 2000b). This occurred, in part, because lay workers were being trained to work in allied fields such as mental health, child welfare, and criminal justice. According to White (2000b), a 1959 report by the Joint Commission for Mental Health and Illness (JCMHI) spurred the paraprofessional movement, as it recommended utilizing indigenous helpers from the community and placing them in paid

service positions. Following the JCMHI report, research by Carkhuff and associates (Carkhuff, 1969, 1971; Carkhuff & Truax, 1965) provided further support by demonstrating that paraprofessionals could be trained to provide effective counseling services for a variety of problems.

Another milestone in the treatment of addictive disorders and the use of the recovering person as counselor came with the passing of the Comprehensive Alcoholism and Prevention and Control Act (1970), also known as the Hughes Act. Harold Hughes, who introduced the bill, was himself a recovering alcoholic. He garnered support for the legislation from other well-known recovering alcoholics, including Bill Wilson, the founder of Alcoholics Anonymous, and Marty Mann, cofounder and director of the National Council on Alcoholism (White, 2000b). This legislation spawned the development of two major research organizations for the treatment and prevention of addictive disease, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and the National Institute on Drug Abuse (NIDA).

A person with addiction will always be at risk of relapse (ASAM, 2011; Erikson, 2007). A common tenet of many mutual-aid organizations is helping others who suffer with an AOD in order to maintain personal sobriety. In fact, the book *Alcoholics Anonymous* (1939) states that “practical experience shows that nothing will so much insure immunity from drinking as intensive work with other alcoholics” (p. 89).

Professionalization of the Substance Abuse Treatment Field

Relative to the addictions field in an historical context, very little has been published in the scholarly literature since the release of *Not God: The history of*

Alcoholics Anonymous (Kurtz, 1979). A literature search conducted via PsychINFO, Medline, CINAHL, and Google relative to the topic revealed mostly William White's works, who has been cited numerous times (White, 1978, 1998, 2000a, 2000b, 2004, 2008, 2009a, 2009b), and is the substance abuse field's leading historian. Earlier works were found in the bibliographies of White's works, such as Dwight's (1944) discussion of the lay counselor in alcoholism treatment and the Krystal–Moore debate (1963) over who was qualified to treat alcoholics. Dr. Henry Krystal adamantly argued against the use of the lay counselor in treating alcoholism, stating that only those who were psychoanalytically trained were competent to perform such work. Conversely, Dr. Robert Moore espoused that psychoanalysis was not the best treatment for alcoholism and that lay counselors, under supervision, were competent to provide support for alcoholism recovery (White, 1998, 2006). Dialogue about the competency and qualifications of alcoholism providers began as early as 1897, when the *Quarterly Journal of Inebriety* published T. D. Crothers' piece, *Reformed Men as Asylum Managers*.

Specialty treatment for “inebriates” and drug addicts nearly came to a halt in the early 1900s with the criminalization of alcohol and drugs (White, 1998, 1999, 2000b). The 1906 Pure Food and Drug Act and the Harrison Act of 1913 helped to fuel this shift in perspective. The Food and Drug Administration, according to White (1999), was developed in response to a letter to Congress that revealed egregious ethical breaches. For example, laboratories identified significant amounts of alcohol and opiates in home cures for alcoholism. White (1999) spoke of the iatrogenic effects of early treatment, which is partially what led to the 1913 Harrison Act. The legislation limited the amount of opiates and cocaine in remedies and required a doctor's prescription for their distribution. A few

years later, prohibition was enacted, which further supported the shift in perspective from alcohol and drug addiction being viewed as an acquired illness to one that viewed the alcohol/addict as a moral degenerate.

Not until the founding of Alcoholics Anonymous in 1935 and the Minnesota Model in the late 1940s did the pendulum began to swing in the other direction. Serious discussion about professionalizing the field really did not occur until the early 1970s. Much of this discussion was sparked by two significant debates of the time: 1) who was qualified to treat addiction (reemergence of the Krystal–Moore debate) and 2) should alcohol and drug addiction treatment be united under one conceptual umbrella (White, 1999).

With the development of two large federally funded organizations in the 1970s whose goals were to research, prevent, and develop initiatives to fight alcoholism and drug addiction, it became clear there was no labor force in place to carry out these initiatives. According to White (1999), most alcohol and drug abuse counselors of the time had more contact with penal institutions than with academic institutions. Most workers were recruited from mutual aid organizations or were developed via the client-promoted-to-counselor position. There were almost no educational programs in place that offered specialized training in substance abuse counseling. In short, there was no professionally trained workforce.

Substance abuse credentialing and regulatory bodies did not surface until the early 1980s. The precursors to the International Certification and Reciprocity Consortium (IC & RC) and the National Association for Alcoholism and Drug Abuse Counselors (NAADAC) began to surface in the 1970s, with organizations such as the National

Association of Alcoholism Counselors and Trainers (1972), and the National Association of Alcoholism Counselors (1974), and the Certification and Reciprocity Consortium/Alcohol and Other Drug Abuse (1981). As the result of their advocacy efforts, state regulatory boards began to spring up across the country in the 1980s. Relative to other helping disciplines such as counseling, social work, psychology, and medicine, addictions treatment as a distinct and legitimate profession is a newcomer to human services.

Before the close of this section, there is an additional point worth mentioning, what White (1998) termed the “the exploitation and relapse of recovering alcoholics and addicts” (p. 274). Because of the lack of formal credentials and the principle of “service” promoted by AA and NA, “clients-promoted-to-staff” often worked long hours, received low pay, and rarely received supervision (White, 1998, p. 274). Not only did these undeveloped lay counselors not have appropriate education and training, but such agency practices often precluded their ability to attend mutual aid groups necessary to support their recoveries (White, 1978). After the development of the NIAAA and NIDA in the 1970s, the field experienced burgeoning growth. Because the field could not keep pace with the rapid growth, there were few quality control standards and training programs in place. One of the unintended consequences of this time was staff relapse. This will be discussed further in the following sections.

The Addictions Workforce

There are approximately 85,500 substance abuse and behavioral disorder counselors (United States Department of Labor [USDOL], 2012a), and 121,100 mental

health and substance abuse social workers (USDOL, 2012b), and these two categories do not overlap. This workforce is projected to increase 27% by 2020 (USDOL, 2012a, 2012d). In addition, mental health counselors and marriage and family therapists also frequently provide substance abuse services. In fact, outpatient mental health and substance abuse settings employ a significant number of mental health counselors and marriage and family therapists, 16% and 11%, respectively (USDOL, 2012c). An additional 48,200 new positions are projected for mental health and marriage and family therapists by 2022. Based on these data, by 2022 as many as 6507 additional positions in substance abuse services may be filled by mental health counselors and marriage and family therapists.

According to Kaplan's (2005) data, the substance abuse workforce, inclusive of both clinical and administrative staff, was between 130,000 and 134,000. Additionally, only 17% of the full-time staff held medical or graduate degrees, 29% held bachelor's degrees or less, and another 37% of full-time staff came from disciplines other than medicine and counseling.

If the USDOL (2012a, 2012b) data are correct, in 2010 there were approximately 208,613 addiction professionals employed in the United States. If 30% to 50% of these professionals are in recovery, then an estimated 62,584 to 104,306 individual addiction professionals are recovering from a substance use disorder. If the nearly 38% relapse rate is accurate, this translates to between 23,000 and 40,000 addiction professionals who will experience relapse over the course of their career.

Employment in the substance abuse field has not provided immunity to this vulnerability. Relapse has been an occupational concern from the earliest days of the

temperance societies to present times. Well-known temperance speakers to modern day recovery advocates have suffered serious consequences from relapse, including overdose, imprisonment, and vehicular homicide. This idea will be discussed in more detail in the following sections.

Prevalence of Recovering Addiction Professionals

As noted previously, persons in recovery from alcoholism were “the mainstream workforce” in the 1960s and 1970s (White, 2006). White (2009) reported that in the 1970s counselors in recovery represented 70% of the substance abuse workforce. But in those facilities that implemented the Minnesota Model, nearly 100% of counselors were in recovery (White, 2009). With the professionalization of the chemical dependency treatment field, including the development of regulatory boards and credentialing and educational standards, the number of recovering addiction professionals has declined (White, 2006).

It is difficult to estimate the prevalence of recovering addiction professionals for a number of reasons. White (2009) suggested that many addiction workforce surveys do not ask about recovery status or, in surveys that do inquire about recovery status, having a family member in recovery is considered being in recovery, and some surveys combine personal and family recovery status. A study published by the National Association of Alcohol and Drug Abuse Counselors (2003) revealed that slightly over 60% of those surveyed reported that they were either in recovery themselves or had a family member or friend with a history of addiction. This illustrates the challenges for accurate assessment of the prevalence of recovering addiction professionals. In this instance, the

variable *recovery* included not only those in recovery from substance addiction but also family members of those with substance addiction (e.g. Al-anon members). Further, White (2009) stated that recent surveys are less likely to inquire about recovery status, and substance abuse counselors are less likely to disclose their recovery status than they were 20 years ago because of stigma associated with being a person in recovery. In contrast, 20 or 30 years ago being in recovery was often the main credential for the addiction professional (Kinney, 1983).

Even though accurate assessment is challenging, it is important to examine the prevalence of recovering professionals in the addictions workforce. Eby and colleagues (2009) analyzed the experiences of 748 counselors and 175 supervisors who worked in 113 chemical dependency treatment facilities throughout the United States. The authors found that approximately 43% of substance abuse counselors and 37% of clinical supervisors were in recovery. White (2009) reported much lower numbers. He stated that although in the 1970s nearly 70% of the substance abuse workforce was in recovery, only 30% reported being in recovery in 2008. In their research on the topic of relapse among addiction counselors, Jones et al. (2009) cited several studies published between 1983 and 1998 that showed recovery rates varying between 50% and 70%. Whether 30% or 70% of the workforce is in recovery, it remains that many addiction professionals have a history of addiction and recovery. Because addiction is chronic, the risk of relapse never goes away (ASAM, 2011; Erikson, 2007), even for the addiction professional.

Relapse in Long Term Recovery (LTR)

Because the majority of recovering addiction professionals are considered to be in long-term recovery (LTR), an examination of relapse rates among people in LTR is needed to understand the extent of the problem. LTR is defined by Jin, Rourke, Patterson, Taylor, and Grant (1998) as at least 18 months of complete abstinence. In contrast, De Soto, O'Donnell, and De Soto (1989) define long-term recovery as 5 years. Since the standard in the field is that a recovering addiction professional should have at least 2 years of recovery before being employed in a substance abuse treatment setting (Bissell et al., 1980; Bissell & Royce, 1987; Kinney, 1983; White, 2008), this benchmark was chosen as the definition of LTR for the purpose of the current research.

Although the literature on relapse in LTR is limited and accurate appraisal challenging, the following studies are worth exploring. Jin et al. (1998) followed 77 subjects over the course of 17 years with the aim of discovering predictors for relapse in people who had achieved LTR. What they found was an overall relapse rate of 31%, with the individual risk in each of the first 5 years of follow-up at 3.8%, declining to 2.6% annually after 5 years. When initially recruited for the study, the average length of sobriety for participants was 4.1 years. The average time from last drink to relapse was 6.1 years. Individually, Jin et al. found an average annual 3% risk of relapse for alcoholics, even with over 5 years of continued abstinence.

Moos and Moos (2006) also examined the phenomenon of relapse. They asked several provocative questions, but relevant to the current paper is “what are the long-term (16 year) relapse rates among helped and nonhelped individuals who achieve short-term remission?” (p. 212). Their participants were divided into two groups, the no help group

and the help group. This was determined on the basis of whether or not they had attended AA, formal treatment, both, or no help when they initially remitted. Prior to implementing the study, these researchers observed reports in the literature of long-term relapse rates between 20% and 80%. Long-term, according to Moos and Moos (2006), is 16 years, but this figure is still ambiguous, as the gap between 20% and 80% is quite broad. In their 3-year remitted sample, Moos and Moos (2006) found that although relapse rates were higher in the no help group (60%), the help group also remained at risk (40%). Overall, they reported their results to be comparable to other findings. In contrast, Schutte, Nichols, Brennan, and Moos (2003), found a dramatically lower rate of relapse among their successfully remitted sample, 11%. It should be noted that their population was older problem drinkers who were between 55 and 65 years old at baseline.

De Soto and associates' (1989) results are more optimistic than most. These researchers conducted a longitudinal study that followed a group of alcoholics over a period of 4 years. The cohort was divided into four groups at the start: group #1 had less than 6 months of sobriety; group #2 had 6 months to 2 years of sobriety; group #3 had 2 to 5 years of sobriety; and group #4 had over 5 years of sobriety. Group #1 had the highest rate of relapse (46%). Group #2 experienced a relapse rate of 24%. After 2 years, the relapse rate declined significantly, and group #3 had a relapse rate of only 8%. Interestingly, in the group with over 5 years of abstinence, none of the 108 individuals relapsed during the follow-up period. However, the authors emphasize that this does not mean there is no chance of relapse after 5 years of stable sobriety; indeed, they reported that two people in group #3 relapsed at the 6 and 7 year marks, and another participant suffered a relapse with 16 years of sobriety prior to the survey. Nonetheless, the risk of

relapse significantly declines after 5 years of stable sobriety.

In a recent paper, White and Schulstad (2009) reported that “existing research suggests that the risk of future lifetime relapse declines to below 15% for those who have achieved five years of continuous sobriety” (p. 37). As observed in the Jin (1998) study, it is important to discern between annual and lifetime risk data.

Barriers to Determining Relapse among Recovering Professionals

Even more challenging than determining prevalence rates of relapse among the general population of people in LTR is determining an accurate estimate of relapse among recovering substance abuse counselors. As previously noted, the literature that inquired precisely into relapse among recovering substance abuse professionals is scant. According to the available evidence, the prevalence data are as follows: Kinney (1983) found a 37.5 % relapse risk over the career span of alcoholism counselors, and Jones et al. (2009) found a nearly identical rate of 37.7%. Although an additional study reported a significantly lower relapse rate of 4.4% (Kahn & Fua, 1992), the primary focus of this research was to evaluate a specific alcoholism counselor training program and not necessarily to estimate relapse. This finding is noteworthy, however, as the prevalence of relapse among the sample in this study was considerably less than Kinney’s (1983) or the Jones and colleagues’ (2009) studies, 4.4% compared to nearly 38%.

Before scrutinizing the literature on the topic, one should understand the barriers to obtaining data on relapse among professionals. The variations in the measurement of variables such as recovery and relapse make the task complicated. Twenty years ago, the standard for recovery was total abstinence, but with more and more acceptance of harm

reduction models, pharmacotherapies, and the inclusion of process addictions (e.g., gambling, shopping, internet, sex, etc.), the definition of recovery has become ambiguous. What determines relapse when a harm reduction approach is utilized? Is one drink considered relapse if a person's drug of addiction was cocaine? An AA member may sometimes maintain abstinence from alcohol for a sustained length of time, but continue to smoke marijuana. What about the use of opiate medications for chronic pain? Are counselors who are on methadone maintenance considered in recovery or relapse? The studies under review (Jones et al., 2009; Kinney, 1983; Kuhn & Fua, 1992; White, 1978) operationalized recovery as abstinence from alcohol, illicit drugs, and abuse of prescription drugs, and violation of abstinence as the determinant of relapse.

Several other confounds make the investigation of relapse rates challenging. First, recovering addiction professionals may not disclose their recovery status due to a fear of being held to a different standard than their colleagues who do not have histories of addiction (White, 2008). Moreover, the recovering addiction professional is less likely to report relapse for fear of losing employment or risking a potential ethical complaint. In addition, relapse may not be identified as it often manifests in other behaviors such as poor work performance, ethical violations concerning client welfare, client relationships, and clinical competency. Finally, recovering substance abuse professionals who consent to being surveyed are generally those who are doing well in their recovery and employment (Jones et al., 2009); hence, there is an inherent selection bias in these samples. The survey conducted by Jones et al. (2009) did not capture data from those who relapsed and subsequently left the field. Having identified these potential biases, the next section will examine what is known specific to relapse among recovering substance

abuse professionals.

Relapse among Recovering Addiction Professionals

In 1983, Kinney conducted the first study to specifically examine the prevalence of relapse among recovering addiction professionals. The impetus for her study was a case of an alcoholism counselor who relapsed and the agency's faulty management of the incident. The participants included 35 alcoholism counselors who had participated in a training program at Dartmouth Medical School between 1972 and 1978. Of the 35 graduates, 24 were recovering alcoholics. A telephone survey found that of those 24 counselors, eight had relapsed and one entered treatment to avoid relapse. There are methodological flaws in this study, the most obvious being the small sample size and limited generalizability. An additional flaw is evidenced in the operationalization of terms, or lack thereof. Although Kinney (1983) reported that nine out of 24 counselors relapsed (37.5 %), she included in this statistic a counselor who had not actually relapsed but who went to in-patient treatment to *avoid* relapse. By eliminating this one counselor from the relapse group, 8/24 rather than 9/24 counselors relapsed, and the relapse rate is changed from 37.5% to 33.3%. Additionally, the study lacks both Institutional Review Board (IRB) approval and an interview or survey to assess for rigor, nor is there a discussion of how the author validated her instrument. Hence, there is no way to further evaluate the rigor of the study.

Further, prior to admission to the Dartmouth program, candidates were meticulously screened. In particular, a minimum of 2 years of sobriety was required and interviewers attempted to screen out those whose self-esteem was tied to helping others

and making restitution, “or those who had little capacity for reflecting on their own experience or differentiating it from that of others” (Kinney, 1983, p. 745). The screening tool for this assessment is not reported. Thus, the study may not generalize beyond the sample. Despite these methodological shortcomings, the findings are alarming whether the rate is 37.5% or 33.3% and imply the need for additional research.

Twenty-six years after Kinney’s study and 17 years after Kahn and Fua’s (1992) study, Jones et al. (2009), in a large national survey, found nearly identical results to Kinney’s 1983 study. Counselors were targeted via the Expedite Media Group, the American Counseling Association, and the National Association of Alcoholism and Drug Abuse Counselors. Approximately 28,300 counselors received surveys and 1239 valid responses were received, resulting in a less than 4.5% response rate. Of those who responded, 468 reported a history of relapse (37.7%). The researchers reported that nearly 91% of respondents were currently doing well in their recovery. Importantly, the survey was unable to capture data from substance abuse counselors who relapsed and did not return to the field, which could increase the prevalence estimate. Although the study had significant statistical power ($\alpha = .80$) and the sample size was large ($n = 1239$), a low response rate (~4.5%) makes the results questionable. The survey population did not receive multiple survey invitations. Multiple solicitations may have increased the response rate substantially and increased the validity and generalizability of the findings.

An additional study quality consideration is relative to the sampling frame. Jones et al. (2009) were unclear about the subsample recruited from Expedite Media Group. Although it was stated that addiction counselors were targeted, participant recruitment strategies were not clear. Moreover, the American Counseling Association includes a

variety of counseling specialties and generalists, so there was no way to screen this subsample to ensure it included only counselors who were specifically addiction professionals. Further, this professional organization consists mainly of master's level counselors. Since the field has a tradition of utilizing the lay counselor, the study may have missed an important segment of the population under investigation. Finally, one would be remiss to ignore the self-selection and self-reporting biases that threaten the validity of the findings.

In his literature review on vulnerability to relapse among recovering addiction counselors, White (2009) discovered interesting findings embedded in lesser known works and not specific to relapse among recovering counselors. Over the past 4 decades, relapse rates have varied significantly, between 5% and 38%, according to White (2009). But in a study of 274 ex-addict counselors, Rhodes and White (as cited in White, 2009¹) found a much higher rate of relapse than the Kinney (1983) and Jones (2009) studies. Forty-eight percent of this group experienced failure, which most often included a return to drug and alcohol abuse. Anderson and Wiemer's (1992) survey results support the findings of Kinney (1983) and Jones et al. (2009). Thirty-nine percent of surveyed administrators disclosed that their agency had experience with an employee who relapsed.

In an examination of the helper-therapy principle, Kahn and Fua (1992) reported substantially lower relapse rates. Interestingly, similar to Kinney's (1983) earlier work, the participants in this study also had a history of substance abuse and were counselors in training. In fact, 90% of the trainees had a history of addiction. Their sample included

¹ I was unable to locate this source as cited in White (2009).

240 Australian Aborigines, with the vast majority holding a 12th grade education or less. According to the authors, almost all had education levels between 8th and 12th grade. Of the 240 who were eligible to participate in the training program, only 145 graduated. Of the 145 who graduated, a relapse rate of 4.5% was reported. For those who completed the first phase of the training program, a relapse rate of 8.4% was cited, but for those who were terminated from the program, 74% relapsed.

As interesting as it is, Kahn and Fua's (1992) study is somewhat less useful for the present research due to multiple methodological problems. First, the homogeneity of the sample negates external validity. Important cultural differences likely exist between Australian Aborigine alcoholism counselors and American addiction counselors. Additionally, program graduates were not all employed in addiction-specific agency settings. For example, some were employed in Aboriginal welfare and health agencies, some were homemakers, eight others were employed in unrelated fields, and others were unemployed. Further, the authors do not specify when postgraduate data were collected, stating that participants were recruited from each cohort beginning in 1978 through the class of 1991, but not when follow-up data were collected. Were they collected 30 days postgraduation, 3 months, 3 years, or more? How long had the participants been clean and sober when they began the program and when follow-up data were collected? Finally, the majority of participants had no more than a 12th grade education, while addiction professionals in the U.S. are more educationally diverse.

Much earlier, White (1978), in an exploratory qualitative analysis, examined the concept of relapse as a phenomenon of burnout. He conducted 22 interviews with staff who identified both as recovering and who reported a previous relapse while employed as

an addiction professional. Although this particular study did not examine the prevalence of relapse, it is the only empirical effort to date that explicitly and systematically examines risk factors for relapse among recovering addiction professionals and more specifically, organizational dysfunction and burnout as risk factors. Although not peer reviewed, the study appeared scientifically sound, including a solid theoretical framework, a logical methodology, a rational sampling plan, use of data triangulation, and thick description, plus a clear description of IRB processes.

Two additional papers have been peer reviewed, but are conceptual rather than empirical. Adams and Warren (2010) explored anecdotal descriptions of responses to relapse among recovering addiction professionals. From these relapse scenarios, a 4-phase process was conceptualized: build-up, crisis, discovery, and repair.

Slightly more useful is the Doukas and Cullen (2010) nonsystematic literature review. The purpose of this review was primarily to identify risk factors for relapse specific to the recovering addiction professional. Additionally, the authors examined the limitations of the studies to date and proposed that a qualitative study be implemented to explore the issue further. The risk factors identified have already been mentioned, including motivation for choosing the addictions field as a career path, overinvolvement with both clients and work, overidentification with clients, and cue exposure. The main limitations the authors identified were the lack of available data relative to the potential for relapse among recovering addiction professionals and the lack of qualitative data.

Relapse among Physicians

To better understand the issue of relapse among recovering addiction professionals, it may be helpful to explore the same issue in other healthcare professions. Physicians, for example, have Physician Health Programs (PHPs) in all 50 states, so outcome data are plentiful (O'Connor & Spickard, 1997). These peer assistance programs provide support and monitoring for impaired physicians. In contrast, I was able to locate only two peer assistance programs for addiction professionals in the United States. New York's Counselor Assistance Program (CAP) was the first of these programs, but in 2009, Texas legislation mandated that addiction professionals have access to a Peer Assistance Program and subsequently developed the Texas Addiction Professional Peer Assistance Network (TAPNET, 2010).

A preliminary examination of the scholarly literature relative to physicians showed that relapse rates for physicians ranged between 22% and 37%. Upon completion of their PHP, a large majority of physicians have been able to return to medical practice. Domino et al. (2005) conducted a retrospective study of 292 opiate-dependent physicians who participated in the Washington State PHP. They found a 25% relapse rate among these physicians followed for 10 years after completion of primary treatment. A Canadian study found similar results. During a 5-year monitoring period of 100 substance dependent physicians, Brewster, Kauffman Hutchison, and MacWilliam (2008) found that although 29% of the 100 physicians had relapsed, 85% went on to successfully complete the program. O'Connor and Spickard (1997) reported that 75% to 85% of physicians treated for substance abuse successfully returned to their medical practice. Reports of 75% to 90% abstinence rates after treatment are commonly cited

(Berg, Seppala, & Schipper, 2009; Skipper, Campbell, & DuPont, 2009). Washington State's PHP 10-year review showed a 25% relapse rate (Berg et al., 2009). A Georgia PHP had slightly lower relapse rates, 22% (Gallegos, Lubin, Bowers, Blevins, Talbott, & Wilson, 1992). Somewhat higher rates were reported by Galanter, Dermatis, Mansky, McIntyre, and Perez-Fuentes (2007). They examined 104 randomly selected records from New York State's Committee on Physician's Health and found that nearly 37% of physicians relapsed during the monitoring period.

One final study worth noting is an early study exploring alcoholism among physicians, nurses, dentists, attorneys and social workers (Bissell & Haberman, 1984). Four-hundred and seven interviews were conducted, with 362 follow-up interviews 5 to 7 years later. All of the participants were self-identified alcoholics and were actively participating in AA. All respondents claimed to have at least 1 year of sobriety at the initial interview and 80% of that sample reported continuous sobriety at follow-up; hence, there was a relapse rate of approximately 20%.

Returning to a previous point relative to the absence of peer assistance programs for addiction professionals, it is curious that the addiction field lacks such programs, as substance abuse is one of the most commonly cited causes of impairment (NASW, 2003). If the nearly 38% relapse rate for recovering addiction professionals is accurate, this number might be reduced by the creation of peer assistance programs to provide services and support for those who relapse, similar to those of PHPs. Implementation of such services might reduce stigma associated with relapse, loss of credentials, and termination of careers. As with physicians, the recovering addiction professional may be able to return to work with monitoring and support rather than being forced to leave their

profession.

As previously noted, one important difference between the addictions treatment field and other health care professions is that many addiction professionals enter the field already in recovery. Since addiction typically requires multiple treatment episodes to achieve optimal benefits (National Institute on Drug Abuse, 2009), recovering addiction professionals who experience relapse and subsequent treatment may have better treatment outcomes than other healthcare professionals. This question warrants future investigation.

Before this chapter comes to a close, one more topic should be addressed—predictors of relapse for recovering addiction professionals.

Predictors of Relapse in Recovering Addiction Professionals

The previous discussion examined what is known to date about the prevalence of relapse among professionals, but it did not address variables that are predictive of relapse. No studies were identified addressing relapse predictors that are unique to recovering addiction professionals. Given the above discussion of the professionalization of the substance abuse field, one might surmise that a lack of education and training might be associated with relapse. Yet, no studies have been located that specifically test even this assumption. What has been assumed, but not empirically verified, so far is described in the following.

White (1978) interviewed 22 addiction professionals and identified several potential relapse predictors, including burnout, organizational dysfunction, and role stressors. White found that workers were discouraged from engaging in their own recovery activities, such as attending mutual aid groups. White (1998) addressed the

exploitation of professionals in recovery, asserting that because these workers often lacked the credentials that other professionals held, they often worked long hours and volunteered for duties that others refused to compensate for their lack of credentials. Employing organizations seized the opportunity to exploit this trait by paying these employees substantially less than credentialed or degreed employees.

Borrowing from family systems theory, White (1978) conceptualized the dysfunctional addiction organization as a closed family system. He suggested that organization dysfunction played a role in staff relapse, particularly naming “closed” systems as problematic. He noted that staff “casualties” increased as the “organizational family became increasingly closed” (p. 1). Additionally, 10 role stressors were identified by White (1978) that may contribute to relapse: role/person mismatch, role conflict, role integrity, role ambiguity, role feedback, role overload, role boundary position, role connectedness, role deprivation, and role termination.

Relative to burnout, those who are in recovery tend to be overcommitted to their work and may have difficulty detaching (Doukas & Cullen, 2010; McGovern & Armstrong, 1987; White, 1978). Doukas and Cullen (2010) identified the following risk factors in their own review of the literature: overidentification and overinvolvement with clients, loss of personal help from self-help groups, and overinvolvement with work. Two additional factors were discussed: motivation for entering the substance abuse profession and cue exposure. Kinney’s (1983) study mentioned that candidates were screened prior to admission to the Dartmouth alcoholism training program for several issues including their motivation for working as alcoholism counselors.

Finally, cue exposure was named as a risk factor, which is a common factor

named in the general literature relative to relapse, but the literature specific to addiction counselor relapse does not identify this obvious and omnipresent risk. Cue exposure is a term that refers to the addicted person being triggered by something external that stimulates a craving to use or drink. For example, a craving to drink may be stimulated for an alcoholic who walks down the beer and wine aisle at a grocery store (Marlatt & Gordon, 1985).

One final study to note is a survey of addiction counselors that sought to discover differences between recovering and nonrecovering substance abuse counselors (McGovern & Armstrong, 1987). Relevant to the present research, the researchers wanted to know if recovering and nonrecovering counselors had differences in what they perceived to be relapse risk factors. There were no significant differences between risk factors identified by the two groups. The factors identified included 1) neglect of personal recovery program, 2) lack of detachment from work, 3) overcommitment to work, 4) discouragement, 5) overidentification, 6) failure to recognize the complexity of the disease and recovery processes, 7) undue expectation where client's recovery is concerned, 8) lack of professional support from other's in the field, 9) lack of teamwork in work setting, and 10) lack of opportunity to pursue professional growth.

In summary, several common predictors are identified among these papers, including 1) lack of detachment from and overinvolvement with work, 2) overidentification with clients, 3) inattention or decreased attention to personal recovery programs, 3) lack of organizational support, and 4) inappropriate motivation for working in the field.

Summary

This chapter provided an overview of what is known specific to relapse among recovering addiction professionals as well as review of the scant literature specific to relapse predictors unique to the substance abuse workforce. Estimated rates of relapse vary between 4.5% and 37.7%. Methodological problems associated with these estimates include small sample sizes, lack of IRB support, homogeneity of samples, low response rates, unrepresentative sampling frames, sample selection bias, self-report bias, ambiguity in the operationalization of terms, and use of unvalidated instruments for data collection.

There is a lack of scientifically validated research on risk factors for relapse. The preceding information on predictors was found embedded in other literature, not literature that specifically studied relapse predictors in recovering addiction professionals, and the prevalence data are scant and ambiguous. It should be apparent after the foregoing discussion that the substance abuse profession has had a long, interesting, and somewhat tumultuous history relative to the employment of recovering alcoholics and ex-addicts as lay counselors. Given what is known about the chronic nature of addiction, it is surprising that so little attention has been paid to the risk of relapse, predictors for relapse, and consequences of relapse specific to the addictions workforce.

The Study

Purpose of the Study

The purpose of the current study was to estimate the prevalence of relapse among addiction professionals in the United States, as well as to explore predictors for relapse that may be unique to addiction professionals. There are a multitude of practice, policy,

ethical, and legal dilemmas that may arise from the issue of relapse among addiction professionals. One potential outcome of the current research is documentation of the need for developing peer assistance programs for addiction professionals. Additionally, it is hoped that the results of this research might inform the development of nondiscriminatory workplace policies for employment of recovering personnel, dealing with relapse, and guidelines for termination of employment.

There have not been any published studies to date that specifically explore predictors of relapse specific to addiction professionals. In the literature that has been identified, educational levels and specific disciplines have not been analyzed to assess their relationship to relapse. Another factor that has yet to be empirically assessed is whether or not length of sobriety has a correlation to relapse, both in terms of entering the field and when relapse occurs. Although lack of attention to a personal recovery program has been cited, no research has empirically validated this as a relapse predictor for the addictions workforce. A personal recovery program typically refers to a recovering person's daily practice of recovery-related activities that help to maintain sobriety; for example 1) attending mutual-aid meetings (AA or NA), 2) calling a sponsor, 3) reading recovery literature such as the AA Big Book, and 4) performing service work within the mutual-aid organization.

Assuming that addiction is a chronic illness with a relapsing course, that approximately 50% of addiction professionals are themselves in recovery, and that the lifetime rate of relapse is estimated at 38%, it makes sense to create safety nets that not only provide support for the recovering addiction professional but also help to protect client welfare, the public, and the profession as a whole. Learning what the relapse

predictors for this population are may help shape clinical supervision meetings, workplace environments, and policies, as well as inform addiction counselor training programs.

Objectives of Current Study

There were two objectives for the research. First, I planned to not only replicate but to improve the national survey conducted by Jones et al. (2009). By paying more attention to detail relative to the sampling frame, sampling very specifically addiction professionals, and increasing response rates by sending multiple survey invitations, I hoped to increase the precision of estimates through the study. Additionally, I explored relapse predictors specific to recovering addiction professionals by adding several items to the instrument used by Jones et al. (2009), particularly related to educational levels, discipline, length of sobriety, and mutual aid group attendance. The following are the specific research questions that guided this inquiry.

1. What is the prevalence of relapse among recovering addiction professionals in the United States?
2. What are the potential predictors for relapse among recovering addiction professionals?

The next chapter will outline the methods for the current research.

CHAPTER III

RESEARCH METHODS

The purpose of this chapter is to describe the methods used in this dissertation research. The chapter begins with an overview of the research design, including the research questions and hypotheses, followed by a discussion of the sampling frame and procedures, survey development and administration, and data analysis.

Design

Because very little is known about relapse among recovering addiction professionals, the research design chosen for this project was a cross-sectional, exploratory, survey design. I employed an internet-based, anonymous survey to provide an estimate of the prevalence of relapse and to identify potential predictors for relapse among a cross-section of recovering addiction professionals in the United States. The relationship of independent variables including length of sobriety on entry to the addictions workforce, length of sobriety when relapse occurred, level of education, professional level (lay counselor, certified, licensed), drug of choice, and mutual-aid group attendance and affiliation were explored in relationship to relapse.

Research Questions and Hypotheses

Research Question # 1: What Is the Prevalence of Relapse among Recovering Addiction Professionals (RAPs) in the United States?

Because so little is known about relapse among recovering addiction professionals and only one study to date has been conducted with limited scientific rigor specific to the topic (Jones et al., 2009), an exploratory analysis seemed fitting. Frequency of relapse was observed for the sample, and differences between groups were explored based on the following independent variables: age, gender, ethnicity, education, professional level, mutual-aid affiliation and attendance, drug of choice, and length of time sober at the beginning of the individual's addictions career. The specific analysis plan is outlined in the data analysis section.

Research Question # 2: What Are Potential Predictors for Relapse among Recovering Addiction Professionals in the United States?

In order to explore predictors of relapse for respondents in the sample, associations between the above-identified independent variables and relapse were explored. The specific analysis plan is outlined in the data analysis section, and a priori hypotheses included the following:

- Hypothesis 2.1: Formal education is a significant predictor of relapse. Specifically, the more formal education RAPs have, the less likely they are to relapse.
- Hypothesis 2.2: Frequency of attendance at mutual aid meetings is a significant predictor of relapse. The more meetings a RAP attends, the less likely they will

- be to relapse.
- Hypothesis 2.3: The type of mutual aid groups (e.g., Alcoholics Anonymous, Self-Management and Recovery Training [SMART], Celebrate Recovery, etc.) professionals attend predicts the probability of relapse, above and beyond the frequency of meeting attendance.
 - Hypothesis 2.4: The longer the length of sobriety when the RAP's addictions career began, the lower the likelihood of relapse, controlling for education, frequency of mutual aid attendance, and the type of mutual aid professionals attended.
 - Hypothesis 2.5: Higher levels of credentialing (e.g., no credential, associate/provisional status, certified, or licensed) predicts lower probabilities of relapse.

Sampling Frame

The study utilized a nonprobability, purposive, and voluntary sampling frame. As no list is available of all recovering addiction professionals in the United States, the sample for the current study was drawn from addiction professionals in the United States who are registered, certified, and/or licensed through the International Certification and Reciprocity Consortium's (IC & RC) United States' state boards. "The IC & RC sets the international standards for competency-based certification programs through testing and credentialing of addiction professionals since 1981. IC & RC is the largest credentialing organization in the field" (IC & RC, para. 3). According to the IC & RC (n.d.), there are 76 member boards worldwide, "including 24 countries, 47 U.S. states and territories, five

Native American territories, and all branches of the U.S. Armed Forces” (para. 4). For this study, only those addiction professionals in the U.S., including the Native American territories and the Armed Forces, were to be included in the subset of addiction professionals.

Because IC & RC is specific to addiction professionals, the planned sampling frame increased the likelihood of reaching addiction professionals in recovery, in contrast with the Jones and colleagues’ (2009) strategy of sampling within organizations such as the American Counseling Association. Although participants drawn from IC & RC may also hold membership in other professional organizations, their IC & RC credential ensures they have addiction specific expertise and experience and are thus considered addictions professionals.

Because the IC & RC is the largest credentialing body for addiction professionals in the world, offers credentials for all educational levels (from a minimum of a high school degree or equivalent), and due to the estimate that as many as half of addiction professionals in the U. S. hold an IC & RC credential, this sampling frame provided access to the largest and most representative sample of addiction professionals possible. The sampling frame also included those who are not fully credentialed, but are in process of becoming credentialed and are in registration, provisional, or associate statuses. According to the IC & RC (n.d.) there are currently an estimated 45,000 addiction professionals worldwide who hold an IC & RC credential. This estimate does not include those who are registered or in the provisional or associate statuses.

Each U.S. IC & RC board was contacted with a request for the total number of registered, certified, and licensed professionals credentialed with their board. Thirteen

boards did not respond. The final count of addiction professionals associated with IC & RC boards in the U.S. was 74,469. With an average of 2300 professionals associated with each board, I expected an additional 29,000 to be added to the aggregate, bringing the total estimate of addiction professionals associated with the U.S. IC & RC boards to more than 100,000.

Estimates have suggested that 30% to 50% of the population of recovering addiction professionals is in recovery (Eby et al. 2009; Greene & Huff, 2010; Jones et al., 2009; White, 2009). Using a midrange estimate of 40%, approximately 40,000 of the addictions professionals who are credentialed or in the credentialing process via IC & RC are therefore estimated to be in recovery. Even if my response rate was as low as Jones and associates' (4.5%), the sample should have been quite large, an estimated sample size of 1800.

Because it was assumed the sample would be at least 1800, an a priori power analysis was not deemed necessary. Large samples reduce the risk of failing to reject the null hypothesis when it is false, a type II error. Since the sample size was expected to be at least 1800 for the current study, the risk of committing a type II error was estimated to be minimal. However, 403 individuals responded to the survey, and 137 were eliminated because they did not meet the inclusion criterion of being in recovery from addiction, bringing the final sample size to 265. While substantially less than the expected 1800, study power remains adequate. Ten cases per variable, or 100 cases, is considered the standard. Because there were seven predictor variables and 265 participants, study power was sufficient. For example, a post hoc power analysis showed study power to be 0.99 for the strongest predictor variable, *meeting frequency*. Details of the achieved power are

outlined in the results section.

According to Rubin and Babbie (2011), a sample size of 140 is necessary to have the probability of committing a type II error equal to the probability of committing a type I error, with $\alpha = .05$ and statistical power of 0.95. Cohen (1992) recommends the following: The convention for power, given $\alpha = .05$, is .80. Further, the risk for committing a type II error is too great when using a smaller value than .80, and increasing this value may require a sample size that exceeds the researcher's resources.

Sampling Procedures

The study proposal was submitted to the University of Utah's Institutional Review Board (IRB). The university's IRB is responsible for reviewing all research projects involving humans to ensure the study is in compliance with laws and the university's ethical standards for research. Because of the voluntary and anonymous nature of this survey research, it was determined that participants were at minimal risk of harm, and therefore the study was exempt from further review.

I solicited support from the IC & RC and its current president to assist in the distribution of the study's invitation to potential participants. The IC & RC president announced the proposed study at the organization's annual meeting in October of 2012. A second announcement was made at an additional meeting. The president agreed to forward the study invitation in an email to each of the United States' IC & RC board presidents who were, in turn, asked to forward the invitation to their constituents. This process was to be repeated every 2 weeks until the email had been sent three times. The methodological literature states that follow-up mailings are an effective strategy for

increasing survey response rates, and the most efficient strategy is to send three follow-up mailings 2 to 3 weeks apart (Rubin & Babbie, 2011). Although three email blasts were planned, the number of respondents to these planned invitations was much lower than expected. Because we had not obtained the projected number of responses, we sent the invitation one last time, for a total of four email blasts.

Before the study invitation was emailed, an introductory letter was sent to all U.S. IC & RC boards. This communication introduced the study and requested that they respond directly to me after the study invitation was emailed to their constituents and in their response include an estimate of the number of emails that were contacted, the number of emails that bounced back and were not delivered, and the total number of registrants with their board. Follow-up emails were planned following each of the three email blasts from the IC & RC. As directed by the IC & RC, I obtained contact information for each U.S. Board from IC & RC's website. A total of 59 introductory emails were sent to the U.S. Boards.

Prior to sending the introductory letters, I made multiple requests for the Board contact list from the IC & RC, as some contact information on IC & RC's website was outdated. My request was denied several times, and each time I was directed to the IC & RC website to gather contact information. This is important because the IC & RC sent the study invitation to over 190 contacts, which is substantially different from the 59 contacts I located on the IC & RC website. When I questioned this, I learned that the email was sent not only to the U.S. Boards, Native American territories, and the five branches of the Armed Services, but it was also sent to international member boards and included not only individual Board Presidents or Directors, but also IC & RC delegates.

The invitation to participate in the study contained a link to access the survey and study documents. The research documents were housed on the web under Western Carolina University's survey software program, Qualtrics. Participants were notified of the importance of the research, benefits and risks of participation, anonymity of their participation, an opportunity to participate in a drawing to receive a \$25 VISA gift card, and the opportunity to be notified of survey results. Participants who elected to be notified of study results and/or enter the drawing for a chance to receive a gift card were instructed to send the researcher an email indicating their desire to be included in the drawing and/or receive study results.

Invitation Development

Because of the sensitive nature of the study and due to prior experience, the study invitation was carefully crafted. An important lesson was learned during a qualitative research class assignment in 2010. The North Carolina Substance Abuse Professional Practice Board (NCSAPPB) denied my request for assistance with study recruitment, stating that it was unethical for the state's regulatory board, charged with the protection of the public, to recruit addiction professionals who had experienced relapse. Bringing this lesson forward into the current research, the study invitation stated,

If you are currently working as an addictions professional and you are also in recovery from alcohol and/or drug addiction, we welcome your participation in this important dissertational research project relative to recovering addiction professionals ... If you have recently worked as an addiction professional and are in recovery, your responses are equally welcome.

Thank you so much for your willingness to take this brief 29 question survey. The survey should take about 10-15 minutes to complete. Addiction professionals who are not in recovery from alcohol and/or drug addiction should not take this survey. (see Appendix A).

The term relapse was not used in the study invitation so recruitment efforts would not place regulatory boards in the same precarious situation faced by the NCSAPPB several years earlier.

Invitation Alteration

Although a concerted effort was made to avoid compromising regulatory boards, the original study invitation was altered by the IC & RC's office staff. The study invitation was sent to the president of the IC & RC, who then forwarded it to the Associate Director of the IC& RC office for distribution. The Associate Director then made a decision to tweak the study invitation to include a segment from the Institutional Review Board (IRB) proposal for my dissertation, which I sent to the president several months prior as I was seeking IC & RC's support for the project. The following explicit statement relative to relapse among recovering addiction professionals was added to the invitation. "The purpose of the study is to provide an estimate of relapse among recovering addiction professionals as well as to discover predictors of relapse that may be unique to addiction professionals.... and will take only 15-20 minutes to complete" (see Appendix B). Not only did the altered invitation include an explicit statement about recovering addiction professionals and relapse, the survey time was incorrect, 15-20 minutes" versus "10-15 minutes" specified in the original invitation. According to Rubin and Babbie (2011), online survey time should be limited to 15 minutes or less. When I discovered the alteration, it was too late: The email blast had already been sent. The two email invitation blasts that followed utilized the original invitation with the "10-15 minute" estimate and no explicit statement about relapse.

Survey Administration

Participants accessed the survey via the study invitation. The email invitation contained the link to the study where the research documents and the survey were housed. The survey was completely voluntary, so those who chose to participate accessed a 29 question instrument via the website. The survey was an anonymous, self-administered questionnaire. Due to the sensitive nature of the research, an anonymous survey seemed the best option for obtaining sensitive data. “The advantages of a self-administered questionnaire . . . are economy, speed, lack of interviewer bias, and the possibility of anonymity and privacy to encourage more candid responses on sensitive issues” (Rubin & Babbie, 2011, p. 405).

Instrumentation

A 29 question survey was used to collect data for analysis. Because Jones et al. (2009) studied the prevalence of relapse among addiction therapists, and the definition of the construct of relapse identified by Jones et al. is the one used for the current research, a modified version of their survey was administered (see Appendix C).

Survey Development

Because this research examined not only the prevalence of relapse among addiction professionals but also potential predictors of relapse, nine questions were added to the original survey constructed by Jones et al. (2009) and others were modified to address the specific hypotheses of the current study. The primary modifications included questions that addressed contributors to relapse, an explicit definition of recovery, and a

question that asked the respondent's recovery status.

The survey begins with relatively benign questions related to demographics and gradually introduces more sensitive questions. Questions related to participant demographics such as age, gender, ethnicity, state of residence, and state of employment are introduced after two grabber questions relative to recovery status and length of time in recovery. Rubin and Babbie (2011) suggest that when surveys begin with questions about demographics, respondents are more likely to quit the survey prematurely. For example, the demographic items include questions such as, "Please indicate your gender," with possible responses of male, female, transgender, or other.

The next set of questions inquires about professional demographics, such as educational level, professional level, and length of time working in the addictions field. Questions 13 and 14 are slightly more sensitive and inquire into the participant's experience with colleagues who may have relapsed. For example, question 13 asks if "a co-worker or employer in recovery ever confided to you that he or she was getting high or drinking?" The next series of question inquires about the participant's recovery experience relative to recovery fellowship attendance (questions 16 and 17). Questions 19 through 28 ask questions specifically about the participant's use or nonuse of illicit drugs, alcohol, or misuse of prescription drugs. For example, question 21 states "During your career as an addictions professional have you ever consumed an alcoholic beverage other than an accidental sip or as part of a religious ceremony?" Question 25 explicitly asks "Have you ever relapsed during your career as an addiction professional?" The final question, 29 is an open-ended question that allows the participant to comment on anything else that "might help the researcher better understand the issue of relapse among

recovering addiction professionals.”

The first draft of the current instrument was pretested in 2010 for a quantitative research class assignment, where it was administered to 10 recovering addiction professionals in Asheville, North Carolina. Based on feedback from the participants, the survey was slightly modified. Minor modifications were made to improve particular questions’ wording and response choices.

This survey version was modified again in 2013 for the current research. The primary modifications made at this time included the addition of more specific questions that would address the research question of not only “what is the prevalence of relapse among recovering addiction professionals in the United States?” but also “What are potential predictors of relapse for recovering addiction professionals?” Also, the ordering of survey questions was altered.

The development of this version of the survey underwent several iterations. After integrating recommendations from my dissertation committee, the survey was pretested with a group of 11 recovering addiction professionals from Asheville, NC. These professionals ranged in educational levels from GED to PhD, from lay counselors to fully licensed professionals. Participants were asked to take the survey and comment on anything that was difficult to understand or confusing. Further, professionals were advised that if they participated in the focus group they would not be allowed to participate in the national study; all agreed. All 11 participants agreed the survey was easy to understand, clear, and not too cumbersome. Most participants completed the survey in 10 minutes, with two out of 11 taking up to 12 minutes to finish.

The comments made by survey respondents were either suggestions not relevant to the

current research or not practical for analysis purposes. One important recommendation that was integrated was for question #27. The question originally asked, “How long were you in recovery before you relapsed?” The focus group recommended changing the wording to “How long were you in recovery and credentialed or working as an addictions professional before you relapsed?” This was valuable feedback as the original wording could have potentially skewed results, as relapse may have occurred before the individual worked as an addiction professional. Finally, an additional question was added that inquired how long the professional has been clean and sober.

It is important to note that the final version of the survey included six different questions relative to relapse, but only one of these was used for the analysis. It was assumed that participants may exhibit denial or resistance to disclosing relapse, hence several questions were included that aimed to pick up denial in the sample. However, participants were forthright in responding to question 25, which asked directly if the professional had experienced relapsed during their career. Further, Questions 26, 28, and 29 were not included in the analysis.

Data Analysis

Data were analyzed utilizing the following tests: simple descriptive statistics, including frequencies, measures of central tendency, and measures of variability; chi square tests for independence; *t* tests; and stepwise logistic regression. The specific analysis plan is delineated below.

Research Question #1: What Is the Prevalence of Relapse among Recovering Addiction Professionals (RAPs) in the United States?

It was anticipated that relapse among RAPs responding to the survey would approximate those found by previous researchers (Jones et al., 2009; Kinney, 1983) and fall between 37% and 38%. Univariate descriptive statistics, chi square tests for independence, and *t* tests were used to examine the prevalence of relapse for the sample. Using measures of central tendency and variability, the characteristics of the sample were described. The dependent variable for this analysis was relapse/no relapse. Chi-square tests for independence and independent samples *t* tests were also used to address associations and group differences relative to the following variables: gender, ethnicity, age, current length of sobriety, educational level, professional level (specific to credentialing), years in recovery when addictions career began, years working in the addictions field, mutual-aid group affiliation and attendance, and drug of choice. The results of these analyses were used to help inform the stepwise logistic regression analysis for Research Question #2.

Research Question # 2: What Are Potential Predictors for Relapse among Recovering Addiction Professionals in the United States?

Stepwise logistic regression was used to test the ability of identified independent variables to explain or predict relapse. In addition to regression statistics, confidence intervals and likelihood or odds ratios were calculated. Because the dependent variable of relapse is dichotomous and the predictor variables are both categorical and continuous, logistic regression was the most appropriate strategy. The predictor variables included

years of education, number of mutual-aid groups attended, type of mutual-aid group attended, length of sobriety, and professional level. It was specified a priori that if differences were found to be significant among gender, ethnic groups, and drug of choice, these variables would be controlled for in the multivariate analyses. Categorical variables with more than two groups were recoded for analysis.

CHAPTER IV

RESULTS

This chapter will present the study's findings. It begins with a description of the sample characteristics and the results for research question #1. Next, results of chi-square tests of associations and *t tests* of group differences are presented. Finally, the results for the multivariate analysis for research question # 2 are presented.

Sample Characteristics

The sample included 403 total responses. After the data were screened for accuracy and cleaned, 137 respondents were eliminated because they were not in recovery and one respondent was eliminated from the sample because s/he only answered two questions, leaving a final sample size of 265.

The mean age of participants was 54.2, with a range between 22 and 77 and a standard deviation of 10.8. Seven respondents did not report their age. Table 1 shows that of the 265 respondents, 150 were male (56.8%), 113 were female (42.8%), and one participant was transgendered (0.4%). Data were missing for two participants.

Table 2 indicates that the majority of the sample was White (82.1%), 11.8% identified as African American, 2.6% as Latino/Hispanic, 0.8% as Asian, 0.4% as Native American, and 2.3% identified as other (Creole, mixed heritage, Eurasian,

Table 1

Gender of survey respondents ($N = 265$)

	Frequency	Percent
Male	149	56.4
Female	113	42.5
Transgender	1	0.4

Note: Missing values = 2

Table 2

Ethnicity of survey respondents ($N = 265$)

	Frequency	Percent
African American	31	11.7
Asian	2	0.8
White	214	80.8
Latino or Hispanic	7	2.6
Native American or Alaskan Native	1	0.4
Other	6	2.3

Note: Missing values = 4

multiracial).

Table 3 presents data related to length of sobriety at the time of survey, length of time employed in the addictions field, and length of time sober when the participants' addictions careers began. The mean length of sobriety at the time of the survey was nearly 19.5 years ($M = 233.3$). Participants had been employed in the addictions field for a mean of 13.8 years ($M = 165.75$). The range of time sober was between 4 months and

Table 3

Time sober at survey, time in addictions field, time sober career start (time in months)

	<i>N</i>	Min	Max	<i>M</i>	<i>SD</i>
Time sober at survey*	263	4	516	233.3	131.2
Time in addictions career**	255	1	504	165.8	127.2
Time sober career start***	225	1	360	67.9	73.7

Note: missing values = 2*; missing values = 10**; missing values = 40***

43 years, with a standard deviation of nearly 11 years ($SD = 131.1$ months).

On average, respondents had been employed for 13.8 years ($M = 165.75$ months). The range of time employed as an addiction professional was between 1 month and 42 years, with a standard deviation of 10.5 years ($SD = 127.2$ months). Ten participants did not respond to this item. The mean number of months ($M = 67.9$) participants were sober when their careers began equaled 5.5 years. It is important to underscore that values for these data were missing for 40 respondents.

Table 4 presents data relative to the respondents' educational level. Participants were relatively well-educated, with the majority holding a bachelor's degree or higher: bachelor's 20.5%, master's 38.6%, doctorate 5.3%, and MD 1.1%. Approximately 13.0% reported having an associate's degree, 17% reported having a GED or high-school diploma, and 2.7% reported they had not completed high school.

Table 5 presents data on the respondents' professional level. Twenty-three participants (8.7%) identified themselves as lay counselors/treatment assistants/techs. Eighty-eight identified themselves as certified (33.2%). The largest group identified

Table 4

Educational level of survey respondents ($N = 265$)

	Frequency	Percent
Less than HS	7	2.7
HS diploma or GED	45	17.0
Associate's degree	35	13.3
Bachelor's degree	54	20.5
Master's degree	102	38.6
PhD, PsyD or equivalent doctoral degree	14	5.3
MD	3	1.1

Note: Missing values = 5

themselves as licensed, 46.4% ($n = 123$). Nearly 10% ($n = 26$) placed themselves in the *other* category. Five respondents did not reply.

Table 6 presents data relative to mutual aid group affiliation. It is important to note that some participants identified more than one mutual aid group in their response. Thus, responses do not equal sample size or 100%. The majority of participants ($n = 181$) affiliated with Alcoholics Anonymous (AA; 68.3%) and Narcotics Anonymous (NA; $n = 76$; 28.3%). Self-Management and Recovery Training (SMART) was identified by nearly 10.0% of participants ($n = 26$). Celebrate Recovery was identified by 19 respondents (7.2%). Cocaine Anonymous (CA) was identified by five participants (1.9%). Only 1.1% of participants identified Wellbriety ($n = 3$), and the least reported group was Women for Sobriety, 0.8% ($n = 2$). Twenty-nine participants chose the *other* category (10.9%), and

Table 5
Professional level of survey respondents ($N = 265$)

	Frequency	Percent
Licensed	123	46.4
Certified	88	33.2
Lay/treatment asst./tech	23	8.7
Other	26	9.8

Note: Missing values = 5

4.5% of participants did not affiliate with a mutual aid group at all ($n = 12$). The most frequently identified groups in the *other* category were faith-based programs and other 12-step groups (Alanon and Adult Children of Alcoholics [ACOA]).

Participants were also asked to report the average number of meetings attended each month. The mean number of meetings participants attended each month was 6.8, with a range between 1 and 30 ($SD = 6.2$). Forty-two participants did not respond to this question. Table 7 presents the breakdown of meeting attendance in terms of weekly attendance, monthly attendance, rarely attends, and never attends. Nearly 60.0% of participants reported weekly mutual aid group attendance. 10.6% of respondents reported monthly attendance, and 18.9% reported attendance as rare. Only 7.5% reported never attending mutual aid groups.

Finally, Table 8 indicates the drug(s) of choice, including alcohol, of participants. Participants were asked to select “all that apply” from a list of the most commonly used categories of substances. A large majority ($n = 205$; 77.4%) indicated alcohol as a drug of choice. Nearly 31.0% of the sample ($n = 82$) reported cocaine or crack cocaine as a drug

Table 6
Mutual aid group affiliation of survey respondents

	Frequency	Percent
AA	181	68.3
NA	75	28.3
SMART	26	9.8
Celebrate Recovery	19	7.1
Wellbriety	3	1.1
CA	5	1.9
Women for Sobriety	2	0.8
Other	29	10.9
None	12	4.5

Note: Some participants identified more than one category

Table 7
Mutual aid group attendance of survey respondents ($N = 265$)

	Frequency	Percent
Weekly	157	59.2
Monthly	28	10.6
Rarely	50	18.9
Never	20	7.5

Note: Missing values =10

Table 8

Drug of choice of survey respondents

	Frequency	Percent
Alcohol	205	77.4
Cocaine/Crack	82	30.9
Opiates/Opioids	57	21.5
Marijuana	76	28.7
Hallucinogens	16	6.0
Benzodiazepines/Barbiturates	30	11.3
Amphetamines/Methamphetamine	38	14.3
Inhalants	8	3.0
Other	9	3.4

of choice. Fifty-seven of the respondents (21.5%) reported opiates/opioid use. Marijuana use was identified by 28.7% of participants ($n = 76$). Only 16 (6.0%) participants identified hallucinogens as a drug of choice. Benzodiazepine and barbiturate use was reported by 11.3% of the sample ($n = 30$). Amphetamine and methamphetamine use was reported by 14.3% of respondents ($n = 38$). The least reported category was inhalants (3.0%). Nine participants (3.4%) identified a drug in the *other* category.

Results for Research Questions

Question #1 – Prevalence

What is the prevalence of relapse among recovering addiction professionals in the United States? It was hypothesized that the prevalence of relapse would approximate that found by Jones and colleagues (2009), 37.7%. The relapse rate for sample respondents was substantially lower than expected, 14.7% ($n = 39$). The vast majority of participants, 85.3% ($n = 226$), reported no relapses.

Group Comparisons

Chi square tests for independence and t tests were used to test associations and group differences. Associations between relapse and gender, ethnicity, educational level, professional level, and mutual aid group affiliation were tested using chi-square tests for independence. T tests were used to test for group differences between respondents who had relapsed and those who had not with respect to length of sobriety, time in recovery at start of addiction career, time working as addiction professional, and frequency of mutual aid group attendance.

Several variables were recoded for statistical purposes. The transgender category was eliminated for analyses, as there was only one participant who identified as transgendered. Because there were so few respondents in ethnic categories other than White, data for participants of color were collapsed into one category for statistical analyses. The drug of choice category was also recoded for data analysis: alcohol only, alcohol plus any other drug, and polydrug use only. The polydrug use category included participants who identified two or more drugs but no alcohol use.

Additionally, for chi-square analysis, educational levels were recoded from eight categories (GED, HS, associate's, bachelor's, master's, doctoral, MD, and less than HS) into two: Associate's degree and less, and Bachelor's degree and higher.

Due to small group sizes and the requirement that categories be mutually exclusive for chi-square analysis, the mutual aid groups were reduced from nine categories (AA, NA, SMART, Celebrate Recovery, Wellbriety, CA, Women for Sobriety, Other, and none) to five categories: AA, NA, MA (multiple affiliations), other, and none. The MA group contained those who identified with AA and/or NA, plus one or more additional groups.

Finally, professional level was recoded for analysis. Because of the lack of standardization across states and the considerable variety of requirements and credentials identified by the participants, these data were recoded and collapsed into three categories: addiction credential, professional helping degree (master's degree or higher helping profession degrees), and lay. The addiction credential category is self-explanatory and includes respondents who hold credentials such as the Licensed Clinical Addiction Specialist (LCAS), the Certified Alcohol and Drug Counselor (CADC), Certified Addiction Counselor (CAC), Master Addiction Counselor (MAC), and many other addiction specific credentials. Participants with master's level helping degrees such as social work, psychology, and counseling and who do *not* hold an addiction credential make up the professional helping degree category. The lay category includes those who do not hold an addiction specific credential irrespective of their educational level, with the exception of those with master's or doctoral-level helping degrees.

Group Associations

There was no evidence of association between relapse and gender ($\chi^2 [1, n = 262] = 2.12, p = .145$), relapse and ethnicity ($\chi^2 [1, n = 261] = 1.25, p = .263$), or relapse and educational level ($\chi^2 [1, n = 262] = 2.12, p = .145$). Additionally, there was no statistically significant association found between drug of choice and relapse, $\chi^2 (2, n = 243) = .730, p = .694$.

A statistically significant association was found between relapse and professional level ($\chi^2 [2, n = 262] = 9.66, p = .008$). To explore the association between relapse and professional level, a cross-tabulation of relapse/no relapse and the three categories of professional level was performed. Participants with addiction credentials had the lowest number of reported relapses, 10.3% ($n = 17$). Less than 18.0% ($n = 10$) of lay counselors reported relapse, and nearly 30.0% ($n = 12$) of participants in the *professional helping degree* category experienced relapse.

In order to identify which relationships were important, post hoc analyses were run using Fisher's exact tests. A statistically significant result was obtained from the comparison between the addiction credential group and the *other* group relative to relapse ($p = .004$, Fisher's exact test [FET]). Results were not significant for comparisons between the addiction credential group and the lay group and relapse ($p = 0.16$, FET), or the lay and *other* groups ($p = 0.22$, FET).

Next, associations between relapse and mutual aid group affiliation were tested. As noted previously, this variable was collapsed and recoded into five categories: AA, NA, MA, other and none. A statistically significant association was identified between relapse and mutual aid group affiliation, $\chi^2 (4, n = 252) = 15.88, p = .003$. Respondents

who affiliated with AA only ($n = 111$) had a relapse rate of 11.7%. Respondents affiliated with Narcotics Anonymous only ($n = 27$) had the lowest relapse rate, 7.41%. The *other* category ($n = 27$), which consisted of faith-based groups, Wellbriety, Women for Sobriety, SMART, and other 12 step groups such as Alanon, had a 29.63% relapse rate. Those who identified with AA and/or NA, plus one or more other groups, had a relapse rate of 14.29%. Finally, participants who reported no affiliation with a mutual aid group had a 50% ($n = 10$) relapse rate.

Post hoc Fisher's exact tests found statistical significance between the following categories: AA only and none ($p = .007$); NA only and none ($p = .009$); MA and none ($p = .016$); and AA only and *other* ($p = .033$)

Group Differences

Independent samples t tests were conducted to examine the mean difference between those who relapsed and those who did not relapse relative to current length of sobriety, time sober at start of addictions career, length of time working as an addictions professional, and frequency of mutual aid group attendance. The effect size values for independent samples t tests were derived from Cohen (1992): small = 0.20, medium = 0.50, and large = 0.80.

There were no significant differences between relapsers ($M = 151.54$, $SD = 132.78$) and nonrelapsers ($M = 168.17$, $SD = 126.33$); $t(253) = 0.74$, $p = .463$ (two-tailed) relative to length of time working in the addictions field. The magnitude of difference in means (mean difference = 16.62, 95% CI [-27.95, 61.19]) was small ($d = 0.13$). According to Field (2009), using a Pearson's r is not only useful as a correlation

coefficient but also as a measure of effect size. Field states that it is preferable due to its simplicity. When group sizes are substantially different, Cohen's d is a more precise measure of effect size (Field, 2009), hence, my decision to use Becker's (2000) effect size calculator (<http://www.uccs.edu/lbecker/index.html>), which computes both with no need for the researcher to conduct complex calculations.

A statistically significant difference was found between relapsers ($M = 180.13$, $SD = 132.49$) and nonrelapsers ($M = 242.57$, $SD = 128.99$); $t(261) = 2.78$, $p = .006$ (two-tailed) in terms of their current length of sobriety. As would be expected, addiction professionals who reported no relapses reported more months of sobriety than relapsers. The magnitude of difference in means (mean difference = 62.44, 95% CI [18.20, 106.69]) was small ($d = 0.39$).

There was also a statistically significant difference between relapsers ($M = 46.08$, $SD = 42.38$) and nonrelapsers ($M = 70.61$, $SD = 76.36$); $t(223) = 2.44$, $p = .019$ (two-tailed) relative to their length of sobriety when they began their addictions career. The magnitude of difference in means (mean difference = 24.53, 95% CI [4.31, 44.75]) was medium ($d = 0.40$; Cohen, 1992).

Finally, a statistically significant difference was found between relapsers ($M = 1.72$, $SD = 1.28$) and nonrelapsers ($M = 2.36$, $SD = .95$); $t(3.00) = 45.90$, $p = .004$ (two-tailed) relative to the frequency of mutual aid group attendance. The magnitude of difference in means (mean difference = .64, 95% CI [.21, 1.07]) was somewhat larger, indicating a medium effect ($d = 0.57$; Cohen, 1992). Table 9 summarizes the results of *t* tests.

Table 9

Differences between relapsers and nonrelapsers for current length of sobriety, time sober at start of addictions career, length of time working as an addictions professional, and frequency of mutual aid group attendance ($N = 225$)

	Group	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i> (two-tailed)	<i>Mean difference</i> (95% <i>CI</i>)
Time as addiction professional (in months)	Relapse	37	151.54	132.78	0.74	.463	16.62 (61.19, 63.77)
	No relapse	218	168.17	126.32			
Current time sober (in months)	Relapse	39	180.13	132.49	2.78	.006	62.44 (18.20, 106.69)
	No relapse	224	242.57	128.99			
Time sober when addictions career began (in months)	Relapse	25	46.08	42.38	2.44	.019	24.53 (4.31, 44.75)
	No relapse	200	70.61	76.36			
Mutual aid group attendance	Relapse	39	1.72	1.28	3.00	.004	0.64 (0.21, 1.07)
	No relapse	216	2.36	0.95			

Research Question #2 – Predictors

What are potential predictors for relapse among recovering addiction professionals in the United States? A stepwise logistic regression was conducted to test the hypotheses outlined in the previous chapter. The dependent variable, relapse, was dummy coded into 0 = no relapse, and 1 = relapse. According to Field (2009), there exists a higher risk of committing type II error with a forward stepwise regression technique, but it fares well in exploratory model building. Logistic regression is also practical when the dependent variable is dichotomous, with both categorical and continuous independent variables.

Multicollinearity can be problematic in regression analyses. This occurs when predictor variables are closely related. If the independent variables are closely related, the outcome of multicollinearity may lead to inflated estimates of effects predicted by the model. Because the predictor variables are categorical and mostly demographic in nature, the items are inherently distinct. Additionally, logistic regression provides the Cox and Snell R^2 and the Nagelkerke R^2 , which provide an estimate of how much variance the model predicted. While variance is an important indicator, this was an exploratory study with the purpose of identifying variables associated with the relapse of recovering addiction professionals.

Four predictor variables were included. This decision was based on the outcomes of bivariate analyses. The predictor variables included frequency of attendance at mutual aid meetings and none; type of mutual aid group (AA, NA, MA, Other), with *none* functioning as the constant; length of sobriety at start of addictions career; and professional level (lay and professional helping degree), with the category of addiction credential functioning as the constant. Because gender, ethnicity, drug of choice, and educational levels were found to be nonsignificant in the chi-square analyses, these were not controlled for as indicated in the initial plan for analysis.

The original regression model, including only the constant, successfully classified 84.5% of participants. The final model correctly classified respondents 84.1% of the time, a minimal decrease. The residual χ^2 statistic was 4.968, $p = .026$. According to Field (2009), this statistic shows that variables not included in the equation are significantly different from 0; thus, adding any of these variables to the model will significantly affect the model's predictive ability. The log likelihood (*-LL*) statistic is used to assess overall

fit of the model (Field, 2009). The $-LL$ for the beginning model was 208.33, and the final model had a $-LL$ of 186.13. This reduction shows that the final model was better able to predict relapse than the original model, which included only the constant. The model as a whole explained between 11.6% and 20.1% of the variance in relapse. Overall, the logistic regression model fits the data well.

In the final model, two predictor variables were found to be significant: meeting frequency and time sober at career start. The more mutual aid group meetings respondents attended per month, the less likely they were to have experienced relapse (Wald = 8.18, $p = .004$). For each unit increase, the odds of relapse decreased by 0.61. Additionally, the longer participants had been sober when their careers began, the less likely they were to have experienced relapse (Wald = 4.73, $p = .03$). For each additional month of sobriety, the odds of relapse decreased by .996. This translates into a decreased risk of nearly 4.8% per year. Although the CI did not exceed 1.00, it did include 1.00 (CI [.993, 1.00]); hence, this result should be interpreted with caution. Table 10 presents the results of the logistic regression analysis.

Power Analysis

A post hoc power analysis was conducted using G*Power software (Faul, Erdfelder, Buchner, & Lang, 2009). Several analyses were run: One for each t test and one on each of the significant variables in the logistic regression model.

Power for t tests was adequate for two of the three tests. The following conventions for effect size were used: small = 0.20, medium = 0.50, large = 0.80. Power equaled .82 when testing the variable *time working as an addiction professional*. The

Table 10

Predictor variables for relapse among recovering addiction professionals

Variables	β	SE	Wald	df	p	Exp(β)	95% CI
Lay	0.235	0.517	0.206	1	0.650	1.264	0.459, 3.480
Prof. helping	0.930	0.476	3.808	1	0.051	2.533	0.996, 6.44
Meeting freq.	-0.502	0.176	8.178	1	0.004*	0.605	0.429, 0.854
AA	-1.171	0.775	2.286	1	0.131	0.310	0.068, 1.415
NA	-1.671	1.051	2.530	1	0.112	0.188	0.024, 1.474
MA	-0.907	0.798	1.292	1	0.256	0.404	0.084, 1.929
Other aff	-0.399	0.846	0.223	1	0.637	0.671	0.128, 3.520
Time sober career start	-0.004	0.002	4.730	1	0.030*	0.996	0.993, 1.000

variable *mutual aid meeting attendance* was also well powered (power = .82). Although the variable *time sober when addictions career began* showed statistical significance ($p = .019$), it was underpowered (power = 0.65).

For the predictor variables, the sample size of 265 was used in each analysis as well as two-tailed input. An effect size of 0.30 was used, and the alpha for this research was $p < .05$. The r -squared for this study was between 11.6% and 20.1%. The more conservative estimate of 11.6% was used for the power analysis. Power was more than adequate for the variable of meeting frequency (power = .92). Although a statistically significant result was obtained for the variable *time sober*, the post hoc power analysis showed that for this finding the study was substantially underpowered (power = .05).

This underscores the importance of conducting power analyses, even if results are statistically significant.

CHAPTER V

DISCUSSION

The final chapter will provide a summary and discussion of the study's findings followed by the study's strengths and limitations. The chapter will conclude with an examination of the study's implications for practice and policy and recommendations for future research.

Summary of Findings

The relapse rate for the sample of 265 addictions professionals was lower than expected, 14.7%. There was no evidence of association between relapse and gender, ethnicity, educational level, drug of choice, or time working in the addictions field. Respondents with specialized credentials as addiction specialists and who had longer periods of sobriety when entering their career in addictions were less likely to experience relapse, while those who had a professional helping degree but not specialized addiction credentials were more likely to experience relapse. Respondents who affiliated with mutual aid groups were less likely to experience relapse, and those with more frequent attendance at group meetings were also less likely to relapse.

Strengths of the Current Study

Comparisons to Previous Studies

The findings of this research are largely similar to those of previous research. For example, some demographic similarities exist between the current sample and Jones and colleagues' (2009) sample, as well as to a national sample used to study addiction workforce issues (Ryan et al., 2009). The similarities suggest confidence in comparing the findings of this study to earlier research. For example, the mean age of the current sample is 54. Jones et al. (2009) found that 56% of their sample was 51 and older. Ryan and associates found a mean age of 52 among Clinical Directors, and nearly 40% of Direct Care staff were 45 and older. The current study found that over 56% of the sample was female, and over 42% of the sample was male. Jones and associates' (2009) sample was almost 47% female and 53% male. Ryan et al. (2012) found 37% of their sample was male and 63% female. Relative to ethnicity, the current study found that 82% of the sample was White, compared to 86% of Jones and colleagues' (2009) sample.

Educational levels and length of time employed in the addictions field are two more comparisons worth noting. For example, the current study found that 41% of the sample held a master's degree or higher, compared to Jones and associates' (2009) 43.6% and Ryan and colleagues' (2012) 52.5%. Additionally, the sample in the current research had a mean length of time employed as an addictions professional of 13.8 years, whereas 52% of the Jones et al. (2009) sample found 10 years or more working as an addiction professional.

The final comparison, and the crux of the current research, is the finding relative to the prevalence of relapse among recovering addiction professionals. Although multiple

similarities exist between the samples noted above, one substantial difference is apparent: the current study found the relapse rate to be 14.7%, compared to Jones and colleagues' (2009) finding of 37.7%. This finding is less than half the rate identified by Jones et al. (2009).

Finally, it was mentioned that recovering addiction professionals may have a lower relapse rate than other professions because recovering addiction professionals, for the most part, enter their careers already in recovery and are immersed in dialogue and education relative to addiction and relapse prevention. Thus, the assumption was made that their relapse rate should be lower. The example used in this manuscript was physicians. Physicians' relapse rates are between 22% and 37%, compared to this study's findings for recovering addiction professionals, 14.7%. This apparent discrepancy in relapse rate should be investigated further.

Predictors of Relapse

A unique element of this study is that it sought to identify potential risk factors or predictors for relapse unique to recovery addiction professionals. There was no evidence to suggest that gender, age, educational level, or ethnicity were predictive of relapse. Overall, three variables were found to have some predictive value: mutual aid group attendance and length of time in recovery at the start of one's career. The third variable is having an addiction specific credential.

Professional level categories were reconceptualized from the original design due to a national lack of standardization for credentialing requirements. For example, a person may be licensed in some states at the bachelor's level and in other states only

master's level counselors can be licensed. This difference in credentialing across jurisdictions was problematic for the current research, so the categories were recoded into lay counselors, addiction credentialed professionals, and professional helping degree. The professional helping degree category consisted of addiction professionals who were degreed in behavioral health disciplines such as social work, counseling, and psychology. The professionals may hold a license in their respective disciplines but not an addiction specific credential. Analyses showed that those with an addiction specific credential had a lower rate of relapse. Having an addiction specific credential may be a protective factor against relapse.

Even those who were labeled as "lay counselors" were at a significantly lower risk for relapse than those in the category. This outcome might be explained by similar protective factors as those for addiction credentialed professionals. Lay counselors frequently held a peer support specialist designation, had training as recovery coaches, or were trained as SMART facilitators. Similar to addiction credentialed participants, but not trained nearly as thoroughly, these lay counselors likely received some addiction specific training in their respective training programs.

This study confirmed previous studies' findings: mutual aid meeting attendance decreases the risk for relapse and enhances abstinence outcomes (Galanter, Dermatis, Post, & Santucci, 2013; Gossop, Stewart, & Marsden, 2007; Schonbrun et al., 2011; Thurstin, Alfano, & Nerviano, 1987). Frequency of mutual aid group attendance was a predictor for relapse; specifically, for each additional meeting attended per month, the relapse risk decreased by .605, or approximately 40%. Closely related to the frequency of meeting attendance was the mutual aid group affiliation variable. Participants who did

not affiliate with a mutual aid group of any type had a 50% relapse rate.

One final predictor of relapse was length of sobriety at the start of one's addiction career. The longer one is sober when they enter the addictions field the less likely they are to experience relapse. Each additional month of sobriety decreased the risk of relapse by .996. For each additional year sober, the risk decreased by 4.8%. This finding warrants further investigation.

Study Limitations

Inherent in survey research are a number of limitations. Frequently noted is the surveys' inability to show causality. Although surveys are typically strong in terms of reliability, cross-sectional survey research can be weak in the realm of validity (Rubin & Babbie, 2011). Specific to the current study, the term *relapse* is a good example. While I provided a definition for the term, respondents may not have agreed and may have operated under a different conceptualization. This was evident by more than one comment received. For example, one respondent stated, "your definition of relapse is flawed."

Sample

An important limitation for the study was the inability to capture data from important subgroups of addiction professionals. Likely the most important subgroup, those who relapsed and left the addictions profession, was not included. It is assumed that the majority of the sample consisted of those who were doing well both professionally and in their recovery. Given the absence of this subgroup, the prevalence of relapse may

be underestimated. Further, the vast majority of the sample was White (82%); hence, the study failed to capture the experience of recovering addiction professionals of color, including respondents who identify as African-American, Latino, Native American, biracial, multiracial, or Asian. Finally, several findings indicate the sample may be biased toward those who are more experienced in the addictions field. The mean length of sobriety was approximately 19 years and the mean length of time employed in the addictions field was 13.8 years. Additionally, 45% of the sample held a master's degree or higher.

Recruitment of Respondents

Several issues related to recruitment of participants in the current research are worth noting. As discussed previously, the original study invitation was altered, and that alteration may have negatively impacted the response rate. While the researcher had an ideal sampling frame from which to draw, the inability of the researcher to recruit directly was problematic. Further, the researcher was not able to determine a precise estimate of response rate. Although individual board presidents were contacted and this information was requested, only four of 59 responded. The researcher had no control in terms of board presidents' willingness to respond to the request for those data. The inability to assess the response rate presents a serious limitation for this study because it cannot be assumed that the resulting sample is representative of the sampling frame.

Data Collection

The primary limitation in terms of data collection for this study is that no normed instrument was available for use. While the authors of the 2009 study (Jones et al., 2009) conducted multiple focus groups with addiction professionals in order to refine their survey, and the current researcher also refined and pretested the instrument, there still exists no standardized survey instrument. The instrument did not undergo any type of psychometric testing for norming or standardization.

Potential Biases

In terms of measurement error, there are two obvious risks—self-report and self-selection biases. It is hoped that by using a voluntary and anonymous survey this threat was reduced, but a social desirability response bias may still be present. Since relapse among addiction professionals is a taboo topic and professionals could potentially damage their careers by disclosing such information, there is a risk that participants answered with more favorable, and less truthful, responses.

Analysis

Because the sample size was much smaller than anticipated, data had to be collapsed into fewer and broader groups for analysis. This limited the ability to provide more precise estimates for specific groups. Additionally, the categorical nature of most variables limited the types of statistical analysis procedures that could be conducted. The logistic regression analysis for *time sober when addictions career began* was underpowered, but the findings were robust and found to be significant. On the other

hand, post hoc power analyses demonstrated that the logistic regression analyses for *time working as an addiction professional* and for *mutual aid meeting attendance* were adequately powered, 0.82 and 0.92, respectively.

Threats to External Validity

The most obvious threat to external validity is the study's inability to generalize to the population of addiction professionals in recovery. Typically survey research allows for very large sample, as was the hope of this research, which reduces this specific threat. Unfortunately, the study did not reach its hoped for minimum sample size, which substantially limits assumptions of external validity.

Implications for Practice and Policy

The study's findings have important implications for the recovery health of addiction professionals. Approximately 20% of relapse can be explained by lack of or low mutual aid meeting attendance, not having an addiction credential, and length of sobriety at the start of one's addiction career. Continued nurturance of one's sobriety through mutual aid group affiliation and attendance may be important to preventing relapse in this population. Often, recovering professionals stop or reduce meeting attendance due to not wanting to be in a meeting with their clients or believing their work is a viable substitute for mutual aid group involvement. Given the results of this research, one recommendation might be that addiction professionals continue involvement in recovery support groups. If the risk of dual relationship exists, professionals may find a mutual aid group that their clients do not attend, attend in a different community or

county, attend a closed professionals group such as Caduceus, or begin their own closed recovery support group for addiction professionals.

Agencies and organizations should also support their employees' recovery activities and cultivate an organizational culture of wellness. When addiction professionals are able to maintain regular self-care activities, including recovery group attendance, burnout, absenteeism and staff turnover may be reduced. As this study suggests, an addiction professional who experiences relapse and subsequently receives treatment and/or involvement in a peer assistance program, recovery outcomes are more likely to be favorable. Hence, organizations should provide a safe, confidential, and nonpunitive mechanism for their employees to access recovery support or treatment. Finally, physician's health programs have consistently shown excellent outcomes relative to addiction recovery. The addictions profession, perhaps conjointly with other behavioral health professions, should develop similar programs for their own professionals.

Credentialing professionals is a means of not only assuring competency, but it is primarily an avenue for protecting the public and ultimately client welfare. The study's findings suggest that addiction specific credentialing is also a protective factor against relapse, which is consistent with both protection of the public and client welfare. Based on this research, agencies and organizations might consider requiring an addiction specific credential of their addiction staff, including staff that hold professional helping degrees and are licensed in their respective disciplines.

Another implication is relevant to those who are interested in pursuing a career in addictions. Those who are considering a career in the addictions field of practice should

examine their own substance use history and motivation for becoming an addiction professional and address issues that arise as indicated. The study's results suggest that the longer professionals are sober, the less likely they are to relapse; thus, for those who are considering a career in addiction, it may be important to establish a solid foundation of sobriety to reduce their risk of relapse.

First, the dearth of literature on the topic may indicate a level of denial. There is a vast literature related to addiction, relapse, and recovery relative to physicians and nurses. One might assume that the addiction field would be a leader in this type of research. Yet, there were only two articles that directly addressed the prevalence of relapse among addiction professionals. Finally, during preliminary information gathering, I was able to locate only two peer assistance programs for addiction professionals in the United States. Again, physicians' and nursing boards have peer assistance programs in every state that work closely with or are tied directly to the states' regulatory boards. It is puzzling that the addiction field lacks such programs.

Recommendations for Future Research

Multiple areas for future inquiry arose from this study. The first recommendation is to replicate this study. This study was intended to replicate the research of Jones et al. (2009), but due to limitations imposed by the sample, additional replications should be conducted. As a result of the smaller than expected sample size, subgroups had to be collapsed for analysis.

Additionally, a group comparison between recovering addiction professionals and physicians with respect to relapse might provide further support for the findings of the

current study. From the results of this study it appears possible recovering addiction professionals have a lower relapse rate than physicians.

A third area that warrants further investigation is the relationship between relapse and not having an addiction credential. Multiple research questions could be developed from this finding. Are social workers more at risk than professional counselors who do not have an addiction credential, for example? What are the specific elements of addiction credentialing that make it a protective factor?

Conclusion

The recovering addiction professional makes a unique contribution to the therapeutic milieu that should not be underemphasized. It is crucial that we put mechanisms in place that protect the addiction professional's recovery and in turn protect public and client welfare. For many professionals and clients alike, the empathic connection that is generated between two people who share the same life experience can be lifesaving. A centuries old tradition does not remain centuries old because it is ineffective, but rather because it inspires something rich and meaningful in the healing process, as it is with this long-held tradition, "... for the therapeutic value of one addict helping another is without parallel" (Narcotics Anonymous, 1982, p. 16).

APPENDIX A

STUDY INVITATION

NATIONAL RECOVERING ADDICTION PROFESSIONALS SURVEY

Dear Addiction Professional,

If you are currently working as an addictions professional and you are also in recovery from alcohol and/or drug addiction, we welcome your participation in this important dissertational research project relative to recovering addiction professionals

(https://wcu.qualtrics.com/SE/?SID=SV_1A1XJQ0ecD9Kbjv). If you have recently worked as an addiction professional and are in recovery, your responses are equally welcome.

Thank you so much for your willingness to take this brief 29 question survey. The survey should take about 10-15 minutes to complete. Addiction professionals who are not in recovery from alcohol and/or drug addiction should not take this survey.

The survey and website have been designed to provide complete anonymity for survey respondents. Protection of your anonymity is essential. It is also crucial to the quality of the study that participants provide honest and frank responses. We do not ask any identifying information in the survey, and the website is designed to prevent anyone, even the researcher, from identifying respondents by any means.

You may print the survey and mail it anonymously if you prefer: Addiction Professionals Survey, 108 Carrier St. Asheville, NC 28806. Or, contact us and we will mail you a survey with a return-addressed, stamped envelope.

Although you will not receive compensation for your participation, as a token of appreciation we would like to offer those who complete the survey the opportunity to receive study results. Also, upon study completion there will be a drawing for four \$25 visa gift cards. When you visit the survey site, you will receive directions on how to request study results and how to enter the drawing.

Once again, thank you so much for your interest in this study. Your participation is appreciated! Remember, only currently or recently employed addiction professionals who are in recovery from alcohol and/or drug addiction should take the survey. Please follow this link to complete the survey and view study details.

https://wcu.qualtrics.com/SE/?SID=SV_1A1XJQ0ecD9Kbjv

Please feel free to forward this study invitation to other addiction professionals who may want to participate.

We are happy to respond to addiction professionals who have questions that are not answered here or on the study website. Please email your questions to:

Dottie Saxon Greene, MSW, LCSW, LCAS, CCS
Assistant Professor, Western Carolina University
Ph.D. Candidate, University of Utah
u06849789@utah.edu

THANK YOU FOR YOUR HELP WITH THIS IMPORTANT RESEARCH PROJECT!!!

APPENDIX B

ALTERED INVITATION

Dear IC&RC Delegates and Administrators,

IC&RC has been approached by a doctoral candidate, Dottie Saxon Greene, asking for assistance in completing her dissertation research. After discussing the scope of her research with IC&RC's President, Dr. Phyllis Gardner, it was determined that IC&RC and our member boards could benefit greatly from the findings. As such, Dr. Gardner is asking for your help. Please take a moment to review the information found below and forward it to your certified professionals, colleagues, and peers in the field. The survey is 29 questions and will take only 15-20 minutes to complete.

https://email.wcu.edu/owa/redir.aspx?C=4XhdVAHc0kOKKQ2iQgqsmZ4X3ukBp9BICcCf_KRXe2WCKgaxHjTmw58Htp6BRK77AtKjhyhx49E.&URL=https%3a%2f%2fwcu.az1.qualtrics.com%2fSE%2f%3fSID%3dSV_1A1XJQ0ecD9Kbjv

Full survey details are below:

NATIONAL RECOVERING ADDICTION PROFESSIONALS SURVEY

Purpose:

The purpose of the study is to provide an estimate of relapse among recovering addiction professionals as well as to discover predictors of relapse that may be unique to addiction professionals. Because addiction is a chronic disorder and frequently has a relapsing course, it is important to understand these issues specific to the recovering addiction professional. The information obtained from the study will be used to help inform non-discriminatory workplace policy and to support the need for Peer Assistance Programs for addiction professionals.

Eligibility requirements:

If you are currently working as an addictions professional and you are also in recovery from alcohol and/or drug addiction, you are welcome to participate in this important dissertational research project. If you have recently worked as an addiction professional and are in recovery, your responses are equally welcome. Addiction professionals who are not in recovery from alcohol and/or drug addiction should not take this survey.

Confidentiality:

The survey and website have been designed to provide complete anonymity for survey respondents. Protection of your anonymity is essential. It is also crucial to the quality of the study that participants provide honest and frank responses. We do not ask any identifying information in the survey, and the website is designed to prevent anyone, even the researcher, from identifying respondents by any means.

Paper Copies:

You may print the survey and mail it anonymously if you prefer: Addiction Professionals Survey, 108 Carrier St. Asheville, NC 28806.

Incentive:

Although you will not receive compensation for your participation, as a token of appreciation we would like to offer those who complete the survey the opportunity to receive study results. Also, upon study completion there will be a drawing for four \$25 visa gift cards. When you visit the survey site, you will receive directions on how to request study results and how to enter the drawing.

Once again, thank you so much for your interest in this study. Your participation is appreciated! Remember, only currently or recently employed addiction professionals who are in recovery from alcohol and/or drug addiction should take the survey.

Please follow this link to complete the survey and view study details:

https://email.wcu.edu/owa/redir.aspx?C=4XhdVAHc0kOKKQ2iQgqsmZ4X3ukBp9BICcCf_KRXe2WCKgaxHjTmw58Htp6BRK77AtKjhyx49E.&URL=https%3a%2f%2fwcu.qualtrics.com%2fSE%2f%3fSID%3dSV_1A1XJQ0ecD9Kbjv

Please feel free to forward this study invitation to other addiction professionals who may want to participate.

Please email your questions to:

Dottie Saxon Greene, MSW, LCSW, LCAS, CCS
Assistant Professor, Western Carolina University
Ph.D. Candidate, University of Utah
u06849789@utah.edu

APPENDIX C

SURVEY

1. Are you in recovery from alcohol or drug addiction?
 - Yes
 - No (If you answered “No”, please submit your survey and stop here)
 - Uncertain (please explain)_____

 2. How long have you been recovery?

Years____ Months_____

 3. Please indicate your gender?
 - Male
 - Female
 - Transgender
 - Other (please explain)_____
- For purposes of this study *recovery* is defined as the intentional cessation of alcohol and drugs and maintenance of abstinence due to past drug and/or alcohol misuse.
4. What is your ethnic identification?
 - African American
 - Asian
 - Caucasian
 - Latino or Hispanic
 - Native American or Alaskan Native
 - Other (please explain)_____

 5. What was your age on your last birthday? _____

 6. About how long have you been working as a professional in the addictions field?
 - Years____ Months____

 7. In what state do you reside? _____

 8. In what state are you employed as an addictions professional? _____

 9. Please indicate your professional level.
 - Lay counselor/Treatment assistant/Tech
 - Certified (specify credential)_____
 - Licensed (specify license)_____
 - Other (specify)_____

 10. How many years of education have you completed? _____

11. What is the highest educational degree you have completed?
- GED
 - High-school diploma
 - Associate degree (specify major) _____
 - BA or BS degree (specify major) _____
 - Masters degree (specify discipline) _____
 - PhD, PsyD, or equivalent doctoral degree (specify discipline) _____
 - MD
 - None (if none, how many years of school did you complete? _____)
 -
12. How long were you clean and sober when your addictions career began?
 years _____ months _____ Not applicable _____
13. During the span of your addiction career, has a co-worker or employer in recovery ever confided to you that he or she was getting high or drinking?
- Yes
 - No
14. During the course of your career in the addictions field, have you worked with (or for) other addictions professionals who identified as being in recovery but were using alcohol, illicit drugs, or abusing prescription medication?
- Yes
 - No
15. At the time you entered the addictions field did you identify as being a person in recovery, or did you recognize your addiction after your career began?
- In recovery when addictions career began
 - Entered recovery after addictions career began
 - Other (please explain)
16. Please indicate the recovery fellowships(s), if any, to which you are the most strongly affiliated. Check all that apply.
- AA
 - NA
 - Wellbriety
 - Celebrate Recovery
 - SMART
 - CA
 - Women for Sobriety
 - None
 - Other (specify) _____

17. On average, how often do you attend meetings of some recovery fellowship(s) like AA or NA?

- _____ times per month
- _____ rarely
- _____ never

18. What personal chemical addiction ('drug of choice') brought you into recovery?

Check all that apply.

- Alcohol
- Cocaine
- Opiates/opioids
- Marijuana
- Hallucinogens
- Benzodiazepines
- Amphetamine/methamphetamine
- Inhalants
- Other substance (specify)_____

19. Have you ever used your drug(s) of choice while employed as an addictions professional?

- Yes
- No
- Uncertain (please explain)_____

20. Have you used any form of illicit drug or prescription drug that was not prescribed to you while employed as an addictions professional?

- Yes
- No
- Uncertain (please explain)_____

21. During your career as an addictions professional, have you ever consumed an alcoholic beverage other than an accidental sip or as part of a religious ceremony?

- Yes
- No
- Uncertain (please explain)_____

22. Do you currently consume beverage alcohol to any extent?

- Yes
- No
- Uncertain (please explain)_____

23. Have you ever been told by a fellow employee or employer in the addictions field that you appear to be impaired by drugs or alcohol?

- Yes
- No
- Cannot remember/not certain

24. During your career as an addictions professional, have you used alcohol or any illicit drug to the point that you feel your job performance suffered?

- Yes
- No
- Uncertain (please explain) _____
- Not applicable, have not used alcohol or illicit drugs during career.

For the purpose of this study *relapse* is defined as any use of alcohol, illicit drugs, or non-prescribed prescription medication after the initiation of recovery.

25. Have you ever relapsed during your career as an addictions professional?

- Yes
- If yes, how many times? _____
- No
- Not certain (please explain) _____
- If No, skip to question #27

26. What factors influenced your relapse? Check all that apply.

- Job stress
- Family/relationship stress
- Life crisis (death, divorce, illness, accident, financial, etc.)
- Mental health issues (depression, bipolar, eating disorder, etc.)
- Stopped attending to personal recovery program (sponsorship, recovery meetings, etc.)
- Believed I was no longer addicted, cured
- Never relapsed
- Other (specify) _____

27. How long were you in recovery and credentialed or working as an addictions professional before you relapsed the first time?

Years _____ Months _____

28. Have you sought professional treatment for drug or alcohol use at any time during the course of your addictions career?

- Yes
- No
- Not certain (please explain) _____

29. Please add additional comments that you think might help the researcher better understand the issue of relapse among recovering addiction professionals.

Thank You!

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