DISSERTATION

IMPLEMENTING EVIDENCE-BASED PRACTICE FOR DUAL DIAGNOSIS: WHAT EDUCATION DO ADDICTION COUNSELING CREDENTIALS REQUIRE?

Submitted by

Rebecca A. Aponte

Department of Psychology

In partial fulfillment of the requirements

For the Degree of Doctor of Philosophy

Colorado State University

Fort Collins, Colorado

Summer 2017

Doctoral Committee:

Advisor: Ernest Chavez

Sharon Anderson
Tracy Richards
Lee A. Rosén

ABSTRACT

IMPLEMENTING EVIDENCE-BASED PRACTICE FOR DUAL DIAGNOSIS: WHAT EDUCATION DO ADDICTION COUNSELING CREDENTIALS REQUIRE?

Substance misuse is a leading cause of death in the United States that disproportionately affects the mentally ill but receives inadequate resources for research and treatment. Prior studies have indicated the majority of individuals with serious mental illness also meet criteria for at least one substance use disorder, and individuals diagnosed with both these conditions experience significantly poorer outcomes. Despite this, treatment facilities have generally failed to adopt Integrated Dual Diagnosis Treatment [IDDT], an evidence-based modality of treatment for the dual diagnosed population. Practitioners of addiction treatment are rarely required to be licensed health professionals, and the credentialing requirements for addiction counselors vary widely by state.

This paper utilizes a mixed-method approach to examine the state-by-state variation in required formal education for addiction counselor credentials with particular focus on coursework related to treating the dual diagnosis population. A directed content analysis of the requirements by state was conducted, followed by a multiple linear regression comparing requirements of addiction counselor education and the ratio of substance use facilities providing a minimal interventions for dual diagnosis. The results indicated no connection between addiction counselor education and likelihood of availability of dual diagnosis treatment within a given state's treatment facilities.

However, significant variation with regard to credentialing was found between states. These issues are presented within the context of the history of addiction treatment in the United States. Implications for policy are discussed, and recommendations for the evolution of the field are made.

ACKNOWLEDGEMENTS

Doctoral dissertations, like most other accomplishments, are not achieved in a vacuum. They require dedication, diligent work, creativity, critical thinking, and collaboration. I was extremely fortunate to have the collaboration of my advisor, Ernie Chavez, who provided significant insight into the framing of the problem, and the discussion of the issues it raised. Countless meetings were spent in his office or, preferably, outside in the sun on Colorado State University's campus, discussing the state of addiction treatment in the United States, the growing opiate abuse crisis, and examining various angles from which to understand how things came to be the way they are. New findings from my research brought about a predictable response from Ernie: expressed shock about the present state of addiction treatment, followed shortly by a blasé account of how inevitable the present state is, given some policy decision from some time in the past. These conversations added significant richness to my understanding of the problem, and I can only hope they are adequately covered here. My committee members rounded out this discussion and understanding of the problems addressed in this project with their unique perspectives and expertise.

I must also acknowledge my research assistants for their hard work and late nights contributing to this project. This project would not have been possible without Devon Dockstader, Ted Fetterling, and Dakota Lorenz, each of whom spent countless hours reading over the incredibly dry, legalistic, and sometimes self-contradictory state regulations governing addiction counselor credentialing. Always on time, always ready to discuss the findings, and always quick with a smile; I deeply appreciate your focus,

and the levity you provided. A special shout-out also goes to Alex Robredo, who could not attend meetings in-person due to a semester abroad, but who contributed to the project remotely.

Finally, an acknowledgement of the role of my friends and family in the completion of this dissertation is warranted. In particular, Michael Aponte, Greg Loebel, Leslie Merriman, and John Welch; thank you from the bottom of my heart. You were each willing to listen to me get on my soap-box, challenge me when you disagreed, and support me with a hug, friendly ear, or shoulder to cry on – sometimes in the same night.

If I appear to stand a bit taller, smile a bit brighter, and talk a bit more emphatically, it is because of you. Thank you all.

DEDICATION

For Michael Aponte. Without you, none of this is possible.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Introduction

A Lethal Problem

For counselors, suicidal clients typically feel like those most at risk in the field. A brief suicide assessment is considered standard practice when meeting any client for the first time, and is repeated at times when the client presents symptoms of hopelessness or depression. Counselors are required to facilitate hospitalization of clients who present an imminent threat of harm to themselves, and may face a wrongful death suit should their client complete suicide. Significant time is spent training counselors to assess clients for the risk of self-harm, and mitigate these risks when necessary. All this training is certainly warranted; suicide is a leading cause of death in the United States. In 2014, the most recent year for which statistics are available, 42,773 Americans were determined to have died by suicide (Kochanek, Murphy, Xu, & Tejada-Vera, 2016). But despite its reputation among counselors as the most serious and fear provoking clinical issue in their profession, suicide is no longer the most lethal behavioral health concern – not by far; substance use is.

In 2014, over 75,000 Americans died as a direct result of substance use, with 30,722 due to alcohol – a number that does not include deaths caused by motor vehicle accidents or homicides (Centers for Disease Control and Prevention [CDC], 2016)– and 47,055 due to drug overdose (Kochanek et. al., 2016). There are currently more Americans with substance abuse disorders (20.8 million) than all forms of cancer combined (U.S. Department of Health and Human Services [HHS], 2016a). More than 8 million of those with substance use disorders were also diagnosed with a mental disorder within the prior year (Center for Behavioral Health Statistics and Quality, 2016).

Given these statistics, all counselors should be trained in assessment and treatment of substance use disorders, at least on par with the training received for suicidal clients, and especially due to the high frequency of comorbidity with other mental illness. Additionally, most evidence-based interventions for substance abuse disorders (e.g. motivational interviewing, contingency management, and behavioral couples therapy) are dissimilar from the more general therapy interventions taught in programs across counseling fields, so clinicians are often unprepared to adequately address addiction using typical therapy skills.

Unfortunately, training in screening and treatment of risky substance use is not taught in most schools of social work or psychology (Institute of Medicine, 2006), and research has shown that few mental health counselors adequately assess for substance abuse in their practice (Freimuth, 2008). Psychiatrists similarly do not engage in screening and treatment of risky drug use as standard practice (National Center on Addiction and Substance Abuse at Columbia University [CASA], 2012), and receive only eight hours of residency training in substance use disorders on average (Institute of Medicine, 2006). Medical, nursing, dental, and pharmacy schools also rarely cover issues related to substance use disorders, despite evidence of serious and even fatal consequences resulting from interactions between prescription and street drugs (HHS, 2016b). The vast majority of medical schools do not require a course on treating addictions, and as of 2006, less than half even offered such a course as an elective (Institute of Medicine, 2006).

Clinical neglect of addictive disorders by medicine and behavioral health fields is a longstanding issue that has finally received serious attention in recent years due to a

sudden upsurge in deaths caused by risky substance use. For more than a decade, the United States has been home to an escalating crisis in opioid use, which has resulted in a dramatic uptick in substance related mortality. Between 1999 and 2014, mortality related to opiates increased dramatically overall (Volkow, 2014), and continued to accelerate, with heroin overdose deaths more than tripling between 2010 and 2014, and overdose of synthetic opioids (e.g., licit and illicit fentanyl, and tramadol) nearly doubling between 2013 and 2014 (CDC, 2016a), and again between 2014 and 2015 (CDC, 2016b). In response to the crisis, the Surgeon General recently released a report on addiction, the first ever of its kind. The report links the rise in heroin usage in the United States to the over-prescribing of opioid painkillers starting in the 1990's (HHS, 2016b). Many patients, once hooked on powerful prescription opiates, turn to cheaper, illicit alternatives as a way to increase their dosage, or as a means to continue their use when access to prescription opiates is blocked (HHS, 2016b). Prior studies have found the best predictor of heroin use is a history of having misused prescription opiates (CDC, 2015).

A Field Born out of Medical Neglect

Substance use disorders are as common as they are destructive, yet they get very little attention in the clinical training of healthcare providers. It is not a surprise, then, that out of the roughly 21 million Americans living with a substance use disorder, less than 12% have received any treatment in the prior year, and only 6.74% received treatment in a program designed specifically for substance use disorders (Center for Behavioral Health Statistics and Quality, 2016). The magnitude of this lethal medical neglect would be unthinkable with any other disease, and yet despite many reports on

the problem (see CASA, 2012; and HHS, 2016b), the general response has been silence rather than outrage.

Clinical and public apathy toward addictive disorders is partly rooted in the self-contradictory nature of the concept: Addiction is both a painful illness that can be alleviated with good treatment, and a behavioral problem that calls for legal consequences. Hickman (2004) explains that in the word's earliest form, *addiction* signified a legal status: being bound to another, obliged, or attached by restraint; in verb form (*addicted*) it denoted being handed down a sentence by a judge. At some point in the evolution of the term, a contradictory meaning was added: "to bind, attach, or devote oneself as a servant, disciple, or adherent," and "to devote, give up, or apply habitually to a practice", (Oxford English Dictionary, 1884, as cited in Hickman, 2004). Both meanings are contained in the word *addict*: a mandatory obligation, and a voluntary attachment (Hickman, 2004). Thus the modern concept of addiction became an inherent paradox: at once compulsory and volitional – an affliction outside one's control, and a behavioral problem within it.

Use of the term "addict" by medical professionals rose in the 20th century alongside the disease concept of addiction, promoted mainly by practitioners who hoped to convey an image of genuine scientific knowledge of the condition (Hickman, 2004). And the paradoxical nature of the addiction concept enabled physicians to make disparate assessments of moral liability for those they saw. The volitional concept of addiction was minimized for wealthy addicts, who were seen as afflicted by the pressures of modern society's rapid changes; such excuses were not available to nonwhite individuals and those of lower class status, who instead were saddled with the

blame for their addiction (Hickman, 2004). Far from being a thing of the past, these moralistic attitudes continue to drive mainstream medicine's indifference toward substance use disorders, as evidenced by sufferer's experiences of contemptuous demeanor by treating professionals (White, 2014).

Some observers see this same phenomenon playing out in the juxtaposition of the responses to the current opioid crisis and the crack cocaine crisis of the 1980s (Cohen, 2015). The response to the crack epidemic was the imposition of draconian mandatory-minimum sentencing laws that mandated much longer sentences for the cheaper version of the drug, which was strongly associated with poor Blacks, than the expensive powder form used by affluent Whites (Cohen, 2015). In contrast, the response to today's opioid crisis, which affects predominantly suburban Whites, characterizes the situation as a public health crisis with victims in need of treatment, rather than of criminals in need of punishment (Cohen, 2015).

The volitional component of addictive disorders has undoubtedly contributed to its second-class status in medicine and mental healthcare. Due to the historical scarcity of hospitals, individuals who were deemed to be morally unworthy were denied care, including alcoholics and other addicts (White, 2014). The medical disregard for addictive disorders created a vacuum into which faith and mutual aid societies stepped, with consequential results still apparent today. As Chiauzzi and Liljegren (1993) observed, "Within the health care field, addiction treatment is an anomaly. Perhaps more than any other discipline, the treatment of addicted people frequently relies more on faith than science, more on personal experience than empirical findings," (p.303). These historical

roots of addiction treatment continue to drive distinct barriers to the professionalization of the field.

Addiction Treatment in the United States

It should be noted that until the 1970's, alcoholism and drug addiction were considered discrete problems. Because alcoholism historically received more attention and treatment efforts than drug addiction, this review of the history of addiction treatment focuses primarily on the issue of alcoholism. The earliest attempts to professionalize the addiction treatment field date back to 1870 with the founding of the American Association for the Study and Cure of Inebriates [AASCI] (White, 2014). The AASCI aimed then to obtain governmental regulation of the nascent alcoholism treatment field, but was unsuccessful in these efforts (White, 2014). At that time, former alcoholics were frequently employed by treatment facilities as personal attendants, a prototype of sorts for today's addiction counselors (White, 2014). Not unlike many organizations in the modern addiction treatment industry, the AASCI emphasized the value of case studies over science, and ultimately lost credibility over the absence of scientific evidence supporting its espoused theories and methods (White, 2014).

Prohibition and Alcoholics Anonymous

In the late 18th and early 19th centuries, use of distilled alcohol surged in the United States, and along with it, the social problems of alcoholism. Temperance societies cropped up across the country in response. These societies initially attempted to promote moderate drinking, and when these efforts failed, the goal was abandoned in favor of total abstinence (White, 2014). When abstinence efforts also failed, the temperance movement took their efforts to the legislature, eventually ushering in the era

of prohibition. One unintended consequence of prohibition was the exacerbation of the medical void for treatment of alcoholism (Lemanski, 2001). Once alcohol use was criminalized, responsibility for alcoholism was displaced from the few extant inebriate asylums toward jails instead (White, 2014). Their services no longer needed, early addiction treatment professions, and most of the contemporaneous treatment facilities, ultimately fell victim to prohibition by the mid-1920s (White, 2014).

The predominant modern interventions for addictive disorders are based on developments in the treatment of alcoholism following the end of Prohibition in 1933. The return of legal alcohol coincided with a time when car ownership was increasing dramatically, and the resulting rise in alcohol-related accidents drew attention to the lack of medical treatments for alcoholism. This void was filled with a number of religious services and grassroots evangelical mutual-aid groups (Lemanski, 2001; White, 2014); by far the most successful of which was Alcoholics Anonymous [AA]. Over time, AA effectively captured the paradoxical concept of addiction by defining it as a disease, but one, which can only be treated through the spiritual processes of repentance and atonement.

AA did not invent the disease concept for addiction. The first American to formally propose the idea was Benjamin Rush (1823). But it was E. M. Jellinek who popularized the disease concept, and his association with Yale through the Yale Center on Alcohol Studies imbued the idea with scientific credibility, (Blocker, 1988). By the end of prohibition, H. M. Jellinek was one of the only researchers working on the problem of alcoholism, a distinction that left him with outsized influence over the nascent field (Lemanski, 2001). In the early days of AA, Jellinek was a frequent collaborator with its

founders. When he used his Yale connection to sponsor Marty Mann's founding of the National Committee for Education on Alcoholism (NCEA, eventually to be known as the National Council on Alcoholism and Drug Dependence, or NCADD), Jellinek put the names of AA's founders on the NCEA letterhead, illustrating just how closely the groups were tied, (Lemanski, 2001). In 1945, when Jellinek sought to conduct research into the nature of alcoholism, he naturally turned to the social network created by AA for his subjects. Jellinek distributed a survey to AA members inquiring about the nature and course of the respondents' addiction to alcohol through the group's periodical *The Grapevine.* Of 1600 surveys send out, only 158 were returned, and of those, only 98 deemed suitable for analysis (Jellinek, 1952). Jellinek utilized these 98 surveys completed by self-selected male members of AA, without a non-AA control group, to come up with taxonomic descriptors of the "species" of alcoholism (Lemanski, 2001). He subsequently published the study in a journal he edited, presented his alcoholic "species" at the Yale Summer School of Alcohol Studies which he founded, and submitted it to the Alcoholism Subcommittee of the World Health Organization, for which he served as a consultant (Lemanski, 2001).

Kellery (1952) further publicized Jellinek's most severe "species" of alcoholism by publishing a subsequent article promoting the idea that this type of alcoholism exists across cultures. This "species" of alcoholism, he argued, included biological tolerance, adaptive metabolism of alcohol, physical dependence, and loss of control over the ability to drink (Lemanski, 2001). Crucially, Keller's 1952 article offers only data drawn from Jellinek's profoundly flawed *Grapevine* survey in support of the "loss of control" aspect of alcoholism (Lemanski, 2001). And it was this rigid "loss of control" element

that proved to be the most controversial over time. Nevertheless, by 1956 Jellinek's disease model was accepted by the American Medical Association (Lemanski, 2001), and quickly became the accepted view of alcohol addiction. AA's literature on their five principles of alcoholism extended Jellinek's disease concept by proposing that the illness is also progressive, fatal, and incurable. Arresting the development of the disease was possible only with total abstinence, obtained through spiritual recovery and a newly constructed identity (White, 2014).

Expansion and Medicalization of the AA Treatment Protocol

In the 1950's two graduates of Jellinek's Yale School of Alcohol Studies began working at Hazelden Farm in Minnesota, where a group of AA members had converted a farmhouse into an inpatient treatment center for alcoholics (Lemanski, 2001). The format at Hazelden utilized a combination of Jellinek's disease concept, the 12 steps of AA, and a team of medical staff and members of the clergy to treat alcoholism (Robertson, 1998). The multidisciplinary interventions developed at Hazelden, as well as simultaneous efforts at similar facilities in Minnesota (Pioneer House and Willmar State Hospital) became a prototype, known as the Minnesota Model, which was quickly replicated on a massive scale throughout the country (Lemanski, 2001; White, 2014). At the time of the Minnesota Model's development, psychoanalysis was the primary school of thought in psychiatric and psychological treatment. But where psychoanalytic theory consigned alcoholism to the realm of symptom – seeing it as a result of an unresolved developmental process – the Minnesota Model promoted alcoholism to the realm of primary disease (White, 2014). Armed with the disease perspective, treatment providers

were able to shift their focus away from the etiology of alcoholism and toward the development of behavior protocols meant to bring about sobriety (White, 2014).

Much of the treatment philosophy to emerge from the early Minnesota Model was gleaned from AA. The counseling provided by clinics in the Minnesota Model involved education about alcoholism as a progressive disease with a strong emphasis on Jellinek's conceptualization of a loss of control over alcohol (Lemanski, 2001). Counselors also engaged in confrontation aimed at breaking down patients' apparent denial about their disease, and promoted heavy involvement in AA (Lemanski, 2001).

One of the key concepts to come out of the Minnesota Model was the idea that only someone who has been an alcoholic can help another alcoholic (Lemanski, 2001). As with the earliest efforts to professionalize the field, recovering alcoholics again formed the pool of eligible addiction counselors. And with the creation of the Counselor on Alcoholism position 1954, recovering alcoholics were able to become credentialed treatment providers in Minnesota so long as they met the minimum requirements: two years of sobriety, and a high school education (White, 2014).

AA's twelfth step, which calls upon those in recovery to carry the message of AA to other alcoholics, provides incentive for many of its members to become addiction counselors. One intention of the Counselor on Alcoholism credential was to distinguish the position of the paid counselor from that of the AA member at the twelfth step (White, 2014). But the primary role of the Counselor on Alcoholism was to act as a role model to patients, leading groups by disclosing their own personal hardship – a role strikingly similar to twelfth-step work in AA. The foundation of professional knowledge and behavior for these first counselors was the philosophy of AA, not of psychology,

psychiatry, or any other healthcare profession (White, 2014). Nevertheless, through the creation of the Counselor on Alcoholism, the Minnesota Model designed a new profession that was quickly reproduced throughout the country, inextricably tying AA philosophy to the medical treatment of alcoholism in the process (White, 2014). The expansive influence of the Minnesota Model continues today, primarily through Hazelden Publishing, which has become the largest publisher for addiction recovery resources in the United States (Crosby, 2016).

Modern Professionalization of Addiction Counseling

The next decades saw explosive growth in the addiction treatment field, in part due to dramatic increases in the rate of addiction among both veterans of the Vietnam War and college students alike. The Economic Opportunity Amendment of 1966 provided over 10 million dollars in funding for the creation of alcoholism treatment and diversion programs, and the preparation of recovered alcoholics to work as alcohol counselors (White, 2014). In 1970, the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act (known colloquially as the Hughes Act) opened significant federal funding for the treatment of alcoholism. The budget of the NCADD, (Jellinek's foundation with early ties to AA) quadrupled in just one year (Lemanski, 2001). And most of the new treatment centers and employee assistance programs (EAPs) to come out of the Hughes Act were created in the established Minnesota Model and related variations on AA's 12-steps.

Rapid expansion of the addiction treatment field meant that the need for counselors far outstripped the available supply. Following the Minnesota Model's system of using reformed alcoholics as counselors, significant numbers of

“professionals by experience” were persuaded to enter the field with no formal education, often before they were themselves finished receiving treatment (White, 2014). Through their hands-on experiences, these paraprofessionals developed skills and specialized knowledge of the recovery process, almost always as conceptualized by the 12-steps (Kerwin, Walker-Smith & Kirby, 2006). But unlike the original Minnesota Model, which employed a multidisciplinary staff that included highly trained professionals (e.g. physicians and nurses); minimally trained addiction counselors now comprise the majority of full-time staff in addiction treatment programs, (CASA, 2012).

Eventually national, regional, and state training programs were established to provide nominal training for new addiction counselors, and the proportion of professionals without any training decreased over time (White, 2014). But the apprenticeship model of education, in which new counselors acquire the necessary skills and knowledge through their own process of recovery and through a paraprofessional role, remains. And individuals in recovery still make up a large proportion of addiction counselors in the U.S., with 34% of them reporting that they were in recovery as of 2012 (Ryan, Murphy & Krom, 2012).

One consequence of apprenticeship training is that treatment programs and individual counselors have historically selected treatments based on personal experiences rather than empirical support (Thombs & Osborn, 2001). Most programs continue to favor treatment models with poor or little empirical evidence of effectiveness (Kerwin, Walker-Smith & Kirby, 2006). Despite the popularity and reach of addictions treatment founded on the 12-steps, empirical support for the model is weak (Chiauzzi & Liljegren, 1993; Ferri, Amato & Davoli, 2006). But until recently, 12-step programs made

up over 90% of the treatment available in the United States (Limanski, 2001). This may have led to a self-fulfilling prophecy, as counselors for whom the 12-step model worked were the most likely to become addiction counselors, and were likely to believe strongly in the model. Because 12-step programs were the only option in many communities, individuals who were not able to be successful with it were unlikely to become addiction counselors. Moreover, addiction counselors who adhere strongly to 12-step models have been found to hold more negative views of evidence-based practices (CASA, 2012). And yet, in the National Treatment Center Study Summary Report, Roman and Johnson (2004) report that 75.6% of treatment center's administrators identified their programs as based on a 12-step model.

The Great Controlled Drinking Controversy

The goal of 12-step programs is total abstinence from the addictive substance. But across treatment philosophies, the goal of treatment is not clearly established. Success is variably defined as total abstinence, a reduction in the harm associated with substance use, a reduction of clinical symptoms (e.g. withdrawal, tolerance), and/or general improvement in health and/or social functioning (CASA, 2012). The lack of agreement regarding the goal of treatment is emblematic of the deep philosophical divides between addiction counselors, often rooted in personal history with addiction. As White (2014) stated, "from the very birth of the addiction treatment field, a strain existed between people whose credibility sprang from personal experience of addiction and recovery and those whose credibility was derived from medical or religious training" (p. 32). The inability of the field to settle upon a goal for treatment makes it very difficult to

measure the effectiveness of treatment practices, and has led to significant controversies within the field.

In particular, the “loss of control” aspect of Jellinek’s disease model has become a fulcrum in the debate over the goal of addiction treatment. After all, if addiction is defined by a loss of control over the addictive substance, no objective short of total abstinence can safely be promoted. But while acceptance of the disease concept in general is not at issue, there is no empirical support for the total loss of control espoused by Jellinek and promoted by AA and other 12-step programs, (Chiauzzi & Liljegren, 1993). And yet, Chiauzzi and Liljegren (1993) described the addiction recovery field as having a “near-religious” attachment to Jellinek’s specific conceptualization.

Vociferous debate erupted within the field after the publication of the Rand Report (1976), which published results of an 18-month follow-up on patients of 44 abstinence-oriented substance abuse treatment centers (Hersey, 2001). The report indicated that 22% of the individuals who had gone through treatment for alcoholism were found to be drinking normally. What offended the addiction treatment community was the description the authors of the Rand Report gave of the normally drinking former-alcoholics as treatment “successes” (Hersey, 2001). Within the addiction treatment field, many counselors and researchers worried that alcoholics would die of their supposedly progressive disease if they lost faith in the idea that they can never have control over alcohol (Hersey, 2001; Peele, 1986).

The controversy peaked in the mid-1970’s, when Mark and Linda Sobell ran an experiment attempting to teach moderate drinking skills to patients who were voluntarily

admitted to Patton State Hospital. Their results, collected two years post-intervention, indicated that training severe alcoholics to drink moderately resulted in better functioning than abstinence training had (Sobell & Sobell, 1976). The addiction treatment community was not amused by this affront on the critical tenet of Jellinek's disease conceptualization. In the years following the Sobell's work, Pendery, Maltzman and West (1982) conducted a follow-up study on the experimental group participants, and published their findings in the highly respected journal *Science.* To some, this was a blatant attempt to discredit the Sobell's work, evidenced by the fact that the researchers did not follow up with the participants from the Sobell's abstinence treatment group. Of the controversy, Peele (1986) commented, "there has been a campaign against controlled drinking, one of unrelenting unreason, smear tactics, and intimidation," (p. 324). Indeed, Maltzman even went so far as to suggest in an interview with *The New York Times* that the Sobells had committed fraud in their controlled drinking study by claiming they did not randomize placement of participants into experimental and control groups (Boffey, 1982). That claim led to investigations into the Sobells' work by the Addiction Research Foundation and the National Institute on Alcohol Abuse and Alcoholism. A separate investigation by a subcommittee of the Committee on Science and Technology of the House of Representatives followed, and eventually cleared them of any scientific malfeasance (Dickens, Doob, Warwick & Winegard, 1982). But the damage was done, as the controversy resulted in "anathema against non-abstinence treatment goals" in the United States (Marlatt, 1985, p. 374).

The controlled drinking controversy demonstrated the significant distrust within the addiction field between individuals in recovery and those who have never been

addicted. Mary Pendery, one of the authors of the *Science* article, was a former alcoholic, and the Sobells accused her of being impartial in her research based on her own issues with alcohol. Pendery, along with others, charged back that promoting anything less than total abstinence is irresponsible and dangerous.

Since the height of the controversy, the debate over controlled drinking has since cooled down considerably. Controlled drinking, along with other approaches accepting of non-abstinence goals, was rebranded under the more palatable umbrella of “harm reduction”. The expansion of substance abuse treatment beyond alcohol also necessitated the development of different types of treatment programs, including methadone management, needle exchanges, and other harm reduction approaches. And a more nuanced understanding of addictive behavior has emerged over time. The original disease model, and its concept of total loss of control is slowly evolving into a chronic disease model, characterized by diminished capacity for control resulting in part from neurological changes in the brain. In support of this idea, researchers have noted that substance abuse relapse rates (40-60%) are comparable to other chronic health conditions, including diabetes (20-50%), hypertension (50-70%), and asthma (50-70%), (McLellan, Lewis, O’Brien & Kleber, 2000). As with other chronic diseases, ongoing monitoring is needed after establishing remission, because the risk of remission remains elevated for years (White, 2012).

The Rise and Fall of Modern Addiction Counseling

Due to the ongoing disinterest in addictions within mainstream health care, the boom in addiction treatment in the 1970’s occurred almost entirely outside its purview. As treatment facilities cropped up across the country, they were staffed by newly

ordained addiction counselors with no medical training, geographically and culturally removed from medical facilities, and administered, regulated, and financed by a system with no connection to the existing health care system (HHS, 2016b). These early addiction treatment facilities filled a very important gap in care for individuals suffering from addictions, and yielded important developments in treatment, including effective, brief behavioral interventions (HHS, 2016b). But the separation of addiction treatment from general health care restricted the treatment options available and reinforced the idea that addiction is not a medical problem; decades later these problems persist (HHS, 2016b).

Professional credentialing of addiction counselors was not an immediate concern for the addiction treatment field, especially in the early days when counselors were in very short supply. Culturally distinct from general healthcare, the addiction treatment field initially failed to develop a code of ethics or quality assurance measures (i.e. credentialing) like those seen in other healthcare fields. Instead, certification and licensing of addiction counselors came about as a result of changing insurance policies that provided for reimbursement for alcoholism treatment, because addiction counselors needed a way to prove their qualifications to insurers (White, 2014).

Addiction treatment centers continued to grow through the 1980's. At private facilities, reimbursement for services relied on the amount of care an insured individual received, not on the success of the treatment (White, 2014). As a result, facilities focused their efforts on maintaining a high census rather than ensuring positive treatment outcomes. Moreover, as White (2014) notes, addiction treatment was not tested with randomized controlled trials at that time, and the studies that were

conducted utilized inappropriate outcome measures (e.g. retention rates; discharge status), short follow-up terms, and low follow-up rates.

Most of today's addiction treatment services are provided through the programs that cropped up during the years of rapid expansion in the field, before insurers demanded evidence that the treatments were effective (CASA, 2012). The core concepts popular among addiction treatment programs, those originated by AA, medicalized by the Minnesota Model, and mass produced through the provision of government funds untied to clinical outcomes, were developed more through clever marketing than research. Although addiction treatment programs performed a necessary function by filling a void left by medical neglect, the field can be rightly criticized for being too reliant on case studies, and too slow to adapt to what outcome studies revealed once they started to be conducted. Like the AASCI of the 19th century, modern addiction treatment has become vulnerable to the perception that it is too unscientific, and not without good cause.

Co-Occurring Mental Illness

Not long after the passage of the Hughes Act in 1970, addiction counselors noticed that many of the people coming to them for treatment also had mental disorders (CASA, 2012). Among individuals seeking help for addictions, co-occurring mental illness is very common. Shahriyarmolki and Meynen (2014) examined patients seen in a community drug and alcohol facility, and found that 72% screened positive for a co-occurring mental disorder. They noted that of those who screened positive, half were not currently receiving mental health treatment, and 37% had never received it (Shahriyarmolki & Meynen, 2014). Schulte, Meier, and Stirling (2010a) found similar

rates: 71% of patients in their study screened positive for co-occurring mental illness, however only half had been identified as such by the clinic, and less than a quarter were currently receiving mental health care. They added that receiving care for mental health concerns significantly improved retention in treatment at 90 days (Schulte, Meier & Stirling, 2010a). A recent survey conducted for SAMHSA indicated that approximately 40% of individuals meeting criteria for a substance use disorder also have a diagnosis for a mental disorder, but less than 7% of these individuals received treatment for both disorders in the prior year (Center for Behavioral Health Statistics and Quality, 2016).

Historically, sequential treatment was the standard, beginning with whichever service the individual first attempted. One reason this approach ultimately failed is that substance abuse treatment facilities were not equipped to treat individuals with serious mental illness, and mental health clinics were not equipped to work with addiction. Further, each diagnosis exacerbates the symptoms of the other, complicating treatment. One of the professional philosophies codified in the Minnesota Model is the definition of the disease of addiction as the etiological root of an individual's dysfunction. In a similar fashion, orientations of mental health professionals frequently defined mental health disorders as the primary cause for individual's problems, including addictive behavior (e.g. the idea that individuals with mental illness self-medicate with substances). It is now recognized that appropriate care for individuals with co-occurring mental health and substance use disorders necessitates concurrent treatment of both interrelated issues, with both diagnoses conceptualized as primary conditions respectively.

Individuals with DD have especially poor prognoses. They tend to have amplified symptom severity and suicide risk, and decreased likelihood of success in treatment

(Woo, Hepner, Gilbert, Osilla, Hunter, Munoz & Watkins, 2013). It is unsurprising that the ability of addiction treatment staff to handle individuals with co-occurring mental illness and substance use disorder predicts better client retention, but many addiction counselors have indicated the need for additional support in working with this complex presentation (Schulte, Meier & Stirling, 2010b). Fundamentally, addiction counselors must at least be able to recognize and assess the signs of mental illness, and refer individuals with co-occurring disorders to appropriate care.

Integrated Dual Diagnosis Treatment

Beginning in 1984, integrated mental health and addiction treatment programs were developed to treat individuals with co-occurring disorders (Duryea & Calleja, 2013). The Center for Evidence-Based Practices has developed a model for integrated dual diagnosis treatment [IDDT], which utilizes a consistent philosophy to guide treatment in order to avoid the mixed messages clients might otherwise receive about the nature and etiology of their addiction or mental health disorder(s) (Kola & Kruszynski, 2010). This model requires a multidisciplinary team of professionals who meet regularly to discuss the client's case holistically, as it affects all areas of functioning (Kola & Kruszynski, 2010). The training requirements call for practitioners to be cross-trained in mental health and addiction counseling so that both sides of the client's disorder can be addressed concurrently, with neither disorder given priority over the other (Kola & Kruszynski, 2010).

IDDT results in increased retention in treatment, higher rates of abstinence, and reduced rates of hospitalization and arrest (CASA, 2012). Further, it allows for safer treatment through informed selection of medications and patient monitoring, as some

psychotropic medications interact with substances of abuse (CASA, 2012). Many individuals with co-occurring disorders are homeless. For this population, access to integrated care is even more critical, because sober living facilities often exclude those with serious mental illness, and board and care facilities for the mentally ill often require sobriety for residence (CASA, 2012).

Barriers to Integrated Treatment

Implementation of IDDT programs has been extremely slow, with several structural culprits to blame. State funding streams for mental health services are different than those of addiction treatment. “This division leaves the burden of aggregating funds to pay for the treatment of co-occurring disorders on the service providers,” (NAADAC, 2010, p.17). Health insurance reimbursements are also disparate for addiction and mental health services, although new rules for coverage of addiction and mental health treatment imposed by the Affordable Care Act [ACA], if maintained, may begin to show signs of mending this funding gap over time.

In addition to the structural issues, barriers at the practitioner level have also been identified. The education and training required of addiction counselors has not kept pace with changes in the expectations of the field, especially in the provision of evidence-based practice, including IDDT (Duryea & Calleja, 2013; Miller, 2015). Thombs and Osborn (2001) place some of the blame on the research community, arguing that research findings are not made accessible, and that researchers have been reluctant to collaborate with treatment providers. But addiction counselors have also shown resistance to evidence-based practices (CASA, 2012), and many lack the basic training required to integrate research findings into their existing practice (HHS, 2016b).

Some researchers note that the addiction treatment industry's reliance upon 12-step mutual-aid groups has left individuals with co-occurring disorders behind. This is due in part to the philosophical underpinnings of traditional 12-step treatment, which can create barriers to IDDT in a number of ways. Chiauzzi and Liljegren (1993) noted that some of the language common in AA (e.g. "sitting on the pity-pot") is potentially demoralizing to vulnerable members, such as those with depression. Miller (2015) suggests that some of the ideas codified in the 12 steps (e.g. that a Higher Power is going to restore sanity to the member) could exacerbate delusions among the seriously mentally ill. He posits other reasons for low attendance at these groups by individuals with serious mental illness and substance use disorders, including unwillingness to abstain from substance use, difficulty connecting socially within the group, and being unable to identify with members' shared stories because their own lives have been so different (Miller, 2015). And although it is not the official stance of AA, historically its members have espoused blanket distrust of any psychotropic drugs as addictive and/or harmful (Chiauzzi & Liljegren, 1993), a stance that is clearly incompatible with treatment for individuals who require medication to manage symptoms of severe mental illness.

Using a forced-choice clinical vignette, Toriello and Leierer (2005) found evidence that addiction counselors would choose to mandate a client with anxiety problems to abstain from all drugs in order to receive counseling, rather than support the client in taking prescribed medication. Although the majority of addiction counselors in the study thought the mood-altering medication would be harmful, those counselors who did not adhere strongly to a 12-step method of treatment thought it would be less harmful than the 12-step adherents, (Toriello & Leierer, 2005).

Distrust between different professionals within the field, which reached its crisis point during the controlled drinking controversy, continues to create barriers to integrated care. Kerwin et al. (2006) note that different levels of formal education and recovery status of counselors may lead to rigid, discordant views between types of counselors. Counselors who are in recovery may hold to the view that one must be addicted in order to truly understand and treat addiction in others, whereas counselors who have never experienced addiction may see their recovering colleagues as biased and unable to set aside their own experience and learn new skills. For their study, Woo et al. (2013) trained addiction counselors to implement a cognitive-behavioral therapy group (GCBT) within an existing substance abuse clinic. They noted that,

"The collaborative approach of GCBT was often directly at odds with the more confrontational stance addiction counselors were accustomed to using with clients (and that is common in substance abuse treatment settings). Counselors were particularly prone to using confrontation when they assumed features of depression (e.g. apparent lack of engagement) reflected factors such as personality pathology or a lack of readiness or motivation to address depression or substance use problems," (Woo et al., 2013, p. 238).

The researchers suggest that the counselors they trained who were themselves in recovery may have experienced cognitive dissonance as a response to being told collaborative counseling is more effective than the confrontational style they had learned and probably received (Woo et al., 2013). Confrontational approaches have been found to be ineffective and even counterproductive by inducing shame and

increasing resistance to treatment (White & Miller, 2007), yet they remain common today among counselors in recovery.

Differences in philosophy and culture, and divergent counseling approaches, combined with structural issues and lack of funding, increase the amount of time clinics need to achieve high fidelity to IDDT programs. During that time, programs are highly vulnerable to addiction counselor staff turnover (Chandler, 2009). Average turnover rates for addiction counselors are very high, ranging between 18.5% and 50% annually (Department of Health and Human Services, 2013). A recent survey of clinical directors of substance abuse treatment facilities found that 54% of direct care staff have worked at their current position less than five years (Ryan, Murphy & Krom, 2012). Because addiction counselors are frequently trained in an apprenticeship model, there is greater variability among early career counselors with regard to experience and knowledge (Duryea & Calleja, 2013). New addiction counselors often enter the field with little or no didactic training in addictions, counseling, mental health disorders, or other related topics. Training variability, plus the time required to teach addiction counselors IDDT protocols and acculturate them to a non-confrontational therapeutic stance likely makes high staff turnover more traumatic than it would otherwise be.

In order to promote evidence-based practices such as IDDT, funding sources are beginning to exert pressure for clinics to demonstrate positive clinical outcomes rather than simply rely on reports of services provided. Given the high rate of turnover, the basic skills and education counselors enter the field with are becoming more salient. It is no longer defensible or profitable to provide services that lack empirical support of effectiveness. But integrating research into practice requires considerable critical

thinking skills, research literacy, and clinical abilities (Kerwin, Walker-Smith & Kirby, 2006). Previous research has found that a large majority of addiction counselors recognize their inadequate training to incorporate research findings into practice (Campbell, Catlin, & Melchert, 2003), and lack of time to gain these skills once on the job (Kerwin, Walker-Smith & Kirby, 2006; Woo et al., 2013).

Indeed, addiction counselor's skills are generally lacking with regard to adopting evidence-based practices for co-occurring disorders (Ager et al., 2011; Miller, 2015; SAMSHA, 2007; Thombs & Osborn, 2001; Wieder & Kruszynski, 2007). In a project setting up IDDT at an existing substance abuse clinic, Wieder and Kruszynski (2007) found "The level of practitioners' clinical knowledge and experience of both severe mental and substance use disorders had been overestimated… several team members required considerable remedial assistance," (p. 109). Among the treatment providers, who came from a variety of professional backgrounds, those with lower educational attainment were less likely to be supportive of evidence-based practices than those with higher degrees (Lundgren et al., 2011).

Variable Credentialing of Addiction Counselors

Today, the majority of treatment providers at addiction treatment facilities are addiction counselors, many of whom have obtained only a bachelor's degree or less (McLellan & Meyers, 2004). But it is unfair and unrealistic to conclude that all addiction counselors are undertrained. The reality is that there is considerable variability between the levels and types of education and training received from one addiction counselor to the next (Duryea & Calleja, 2013). Still, a significant proportion of addiction counselors

lack the training necessary to provide evidence-based treatment or assess co-occurring disorders, such as those with co-occurring disorders (Institute of Medicine, 2006).

Not including counselors with master's, doctoral, nursing, medical or other advanced degrees, the list of professional titles for those in the addiction treatment field includes, but is not limited to, addiction counselors, drug and alcohol counselors, substance abuse counselors, and chemical dependency counselors. Different levels of certification or licensure exist within titles, expanding the variability of professional training within the field. This may represent yet another barrier to integration of research and counseling, as the different standards for practice and terminologies used by these professionals could prohibit the translation of new research into practice (Kerwin, Walker-Smith & Kirby, 2006). Specifically, the quality of the cross training required in order to implement IDDT is likely to be very inconsistent across professional titles, levels of certification, and between different geographical areas.

In the United States, each state sets its own legal mandates and qualifications required to practice counseling, both for mental health and addiction counseling. But the standards for mental health counselors are much stricter than those for substance abuse counselors. All but one state (Colorado) require a master's degree in order to be a mental health counselor. In contrast, as of 2006, over half of states did not require a college degree as a minimum condition for becoming an addiction counselor (Kerwin, Walker-Smith & Kirby, 2006). According to a survey of substance abuse facility clinical directors conducted by Ryan, Murphy, and Krom (2012), 46% of clinical staff members at addiction treatment facilities are neither certified nor licensed, with half of that number also not pursuing certification or licensure. The study also found that staffing addiction

treatment facilities is hampered by the lack of experience and training applicants bring to the table; often applicants have little to no prior experience working with addiction treatment at all (Ryan, Murphy & Krom, 2012).

Some states have one single, clearly defined board that puts forth a particular set of standards; others have multiple boards offering credentials based on competing professional addiction counseling organizations, and some states have a certification board as well as a licensing board in competition with each other (Miller et al., 2010). This disjointed system leads to curriculum development with no clear quality checks in place (Miller et al., 2010).

Without quality assurance, even the minimum standards for pre-service education of addiction counselors are highly variable. Mustaine, West, and Wyrick (2003) found that even educational requirements specific to the topics of counseling, and drug and alcohol treatment was minimal, which calls the quality of preparation for the provision of basic client services into serious question. Kerwin, Walker-Smith and Kirby (2006) similarly found that counseling, treatment, and client education were not required topics for addiction counselors in nine states. Although substance abuse facilities' report that their services utilize evidence-based interventions (SAMHSA, 2015), providers need to be qualified and trained in order for the therapy to be delivered with high enough fidelity to be considered evidence-based. Many addiction treatment facilities are staffed by counselors who have not received adequate training in evidence-based practice, and instead continue to rely on general group counseling (SAMHSA, 2013), despite the lack of evidence supporting this method of intervention (Center for Substance Abuse Treatment, 2005; McGovern, 2003). With regard to co-occurring

mental illness, Kerwin, Walker-Smith, and Kirby (2006) found only found two states in which a course in psychopathology was required for addiction counseling practice.

Apprenticeship (i.e. documented hours working under supervision), rather than formal education, comprises a significant proportion of the training required by most credentialing organizations, yielding significant inconsistency in addiction counselors' preparation for practice (Duryea & Calleja, 2013). Apprenticeship training also presumes ongoing skills acquisition through hands-on experiences, but accomplishing this ideal requires sufficient foundational knowledge, as well as time and resources to devote to continuing training after starting in the field. In other counseling fields, formal education provides standardization of core knowledge and vocabulary, teaches students the critical thinking skills necessary to base practice on empirical evidence, and plays a crucial role in shaping professional culture and behavior. Each of these areas has been identified as obstacles to the implementation of IDDT (e.g. Chiauzzi & Liljegren, 1993; Duryea & Calleja, 2013; Miller, 2015; Toriello and Leierer, 2005). Moreover, because the majority of professionals providing substance abuse treatment are addiction counselors, the professional preparedness of these counselors represents a critical fulcrum with regard to the implementation of IDDT.

The Present Study

Given the number of credentialing boards within each state, the variety of credentials offered, and the levels of certification offered within each credential, analysis of every type and level of addiction counselor in the United States is prohibitive. Entry-level requirements were selected as the focal point because they represent the most straightforward measure of the differences in standards for practice between states.

Most states offer various degrees of certification or licensure (e.g. Certified Addiction Counselor level I, II, or III), but the meaning of these levels across states is inconsistent. Prior studies have examined the general issue of variability in addiction counselor credential requirements (e.g. CASA, 2012; Mustaine, West & Wyrick, 2003), and broad differences between requirements for mental health counselors and addiction counselors (e.g. Kerwin, Walker-Smith & Kirby, 2006). The present study adds to this research by specifically investigating the formal coursework requirements for addiction counselors relevant to providing treatment to individuals with co-occurring mental illness and substance abuse.

The present study examined the formal education required of entry-level counselors. Four specific target topics, which encompass essential knowledge for providing IDDT, were selected. These topics are: 1) counseling skills, 2) evidence-based practice, 3) psychopathology, and 4) dual diagnosis. Second, we examined whether higher educational requirements in any of the four target categories was associated with each state's ratio of substance abuse facilities offering specialized programming for co-occurring disorders, using data from the National Survey of Substance Abuse Treatment Services [N-SSATS].

Topics included in the survey questionnaires include the primary focus of the facility (e.g. substance abuse treatment, mental health treatment, a mixture of substance abuse and mental health treatment), the type of care offered (e.g. inpatient, outpatient, intensive outpatient, detox), clinical approaches (e.g. relapse prevention, motivational interviewing, 12-step facilitation), and specialized programming for specific

clients (e.g. co-occurring mental health and substance use disorders, adolescents, females, LGBTQ) (SAMHSA, 2015).

Method

Overview

This study utilized a mixed-methods design beginning with directed content analysis of the minimum education requirements relevant to treatment of co-occurring disorders in each state. Data from the N-SSATS provided statistics of the percentage of treatment facilities that offered treatment for co-occurring disorders within each state. The proportions of facilities offering co-occurring treatment within each state were then regressed on the level of education required in the target categories.

Directed Content Analysis

A directed content analysis was performed on state credentialing boards' regulations and supporting documentation (e.g. brochures, certified addiction counselor applications, board websites) describing the minimal formal education requirements that enable independent practice. Independent practice is defined as the ability to independently run group or individual therapy within an established treatment program, without having to identify oneself as a "trainee", "aide", "intern", or "assistant" counselor. Directed content analysis is an approach that can be used to validate or extend a theoretical framework, (Hseih & Shannon, 2005). This method utilizes deductive category application, which entails providing operationally defined categories prior to analysis, and determining coding rules within each category a priori (Mayring, 2000). The process begins with identification of the important concepts as coding categories, followed by determination of operational definitions for each category, liberally sorting of the text into these categories, and lastly reviewing the sorted text for final coding using the predetermined codes (Hseih & Shannon, 2005).

Some states have multiple types of certified addiction counselors (e.g. Certified Addiction Counselor, Certified Drug and Alcohol Counselor, Substance Abuse Counselor, Chemical Dependency Counselor). In these cases, the certification or license with the lowest educational requirements was analyzed. Some states do not require certification or licensure of addiction counselors in order for them to practice within an agency. In these cases, the states were eliminated from further analysis.

The directed content analysis coded requirements into four operationally defined target categories of education in: psychopathology (e.g. mental health diagnosis, abnormal psychology), dual diagnosis treatment (e.g. co-occurring disorder treatment, integrated treatment), general counseling skills, and evidence-based practice (e.g. empirically supported treatments, research methods). Within each of these target categories, the states' educational prerequisites were then coded by the rigor of the requirement. Due to the vague language used in the statutes and regulations governing addiction counseling practice, the rigor levels were determined a priori as: *none* (no specific mention of the target category in regulation or supporting documents), *some* (specific mention of the target category, but no specification of the number of course hours), and *detailed* (specific mention of the target category, and specific requirement for the number of course hours).

During the content analysis process, the level *minimal* was added in order to accurately describe the rigor of a target category's requirement when the category was mentioned within the relevant statute or regulation (and therefore, more than the level *none*), but done in such a way that it was unclear whether it was suggested learning or required learning (and therefore, less than the level *some*). Several states utilize the

standards set by the International Certification and Reciprocity Consortium (IC&RC) as a guideline for their credentialing statutes. Descriptions of educational requirements in states that use IC&RC standards typically made vague reference to knowledge of the four IC&RC *domains*. For example, documentation from the state of Arkansas ambiguously requires 270 clock hours of formal education (e.g. seminars and workshops), with six hours explicitly reserved for ethics. Aside from the ethics requirement, the only specificity for counselor education provided is that it "must be specifically related to the knowledge and skills necessary to perform the tasks within each IC&RC/AODA practice dimensions," (Arkansas Substance Abuse Certification Board, p. 16). Since IC&RC does not have a classification of required knowledge specifically referred to as *practice dimensions*, one would likely assume this rule relates to IC&RC's *domains* of practice. IC&RC's four broad *domains* together contain 33 *tasks*, further delineated into a total of 193 specific *knowledge points*. Only one of the 193 IC&RC *knowledge points* references psychopathology: "Signs and symptoms of co-occurring mental health disorders," (International Certification & Reciprocity Consortium, p. 13). Thus, states like Arkansas that utilized these requirements without changes were rated as requiring a *minimal* level of education in psychopathology. In general, in states that utilized the IC&RC standards, a target category was rated at the level of *some* when it was referenced directly in the title of a *task* or *domain*, but *minimal* when it was only mentioned in a *knowledge point*.

For most states, the documentation detailing whether a credential was required at all for practice was straightforward. For example, Georgia's Alcohol & Drug Abuse Certification Board website states: "Certification is a voluntary process whereby

professionals with a special interest in providing treatment to substance abusers and their families may receive recognition for their competency" ("Certification," para. 2). Kentucky's Board of Alcohol and Drug Counselors website notes, "The board examines and certifies all eligible candidates for entry into the profession of Alcohol and Drug Counseling" ("Board of Alcohol," para. 1). Many states, however, offer lengthy documentation on the process of becoming credentialed without explicitly stating whether it is a mandatory requirement for practice. In cases such as this, the regulatory boards were contacted via phone or email for clarification.

Among these states, the responsibility for gatekeeping the profession was placed on the facilities hiring addiction counselors. Illustrating this, a response from Arizona's Board for Certification of Addiction Counselors reads in part, "At some agencies, if the agency is state licensed then they can employ individuals who are not licensed or certified. It is up to the individual agency and their license and it also varies depending on the specific agency's policies and procedures," (J. Nellsch, personal communication, June 9, 2016). States that recognize but do not require credentials for practice essentially have no minimum credential. Therefore, states that offered but did not require certification or licensure were excluded from further analysis.

Multiple Linear Regression

The N-SSATS is a recurring survey of all known substance abuse treatment facilities in the United States, conducted annually by SAMHSA. The most recent survey for which data was available for analysis was conducted in 2014. The mailing list for the survey was compiled by identifying substance abuse treatment facilities through the Inventory of Behavioral Health Services, a national inventory, maintained by SAMHSA,

of all behavioral health sites offering substance abuse treatment. Data for this survey was collected between March 31, 2014 and December 5, 2014. New facilities were added to the mailing list during the first three months of the survey data collection period (SAMHSA, 2015). Each identified facility was sent letters requesting the site complete the survey via paper or online. Reminder letters were sent, and all facilities that had not responded after the second letter were sent a hard copy of the survey. Two weeks after mailing the hard copy, phone calls encouraged any remaining sites to complete the survey via computer-assisted telephone interview. The overall response rate for the survey was reported to be 94% of all identified facilities offering substance abuse treatment in the United States, and 92.2% were included in the study (SAMHSA, 2015). Facilities that were excluded from the report included halfway houses not providing treatment, private practices that did not receive state agency approval for inclusion, and facilities that only served inmates (SAMHSA, 2015).

When the present study was proposed, a multiple linear regression was planned following the summative content analysis in order to examine whether there was a relationship between the educational requirements in the target categories and the percentage of substance abuse facilities offering treatment for co-occurring disorders by state. Although no specific hypotheses were made, we wanted to examine whether the required level of education in the target categories predicted with the percentage of facilities offering this treatment.

Results

Directed Content Analysis

Content analysis of all 50 states revealed significant variability between states in required education, both generally and with regard to the target categories we examined. Formal education requirements generally tended to be ambiguous; many states stipulate a number of hours of education, but do not delineate how many hours must be spent on a given subject (with the general exception of ethics), or whether a certain subject needs to be addressed at all. For example, Connecticut cryptically requires 300 “addiction-specific” hours of “training and experience,” with a “maximum of 100 hours from approved elective courses with addiction content,” (example courses fitting this last description are listed to include introductory general psychology), (Connecticut Certification Board, p.2). None of the target categories could conclusively be counted as required in this case, because it would be feasible for an aspiring addiction counselor to get the required hours of “addiction-specific” training without taking a course in one or more of our target categories (e.g. by focusing instead on other related courses such as drug and alcohol education, community outreach, and chemistry of addictions).

In all, 29 states were determined to require either certification or licensure for the practice of addiction counseling, which is an increase from 2005, when Kerwin, Walker-Smith, and Kirby (2006) counted 25 states with such a requirement. Figure 1 illustrates which states require a credential (i.e. certificate or license) for practice. One consistency across states was that none required education in the target category of dual diagnosis treatment. This target category is therefore not included in the tables and figures, and

was not analyzed further. The number and percentage of states with minimum requirements at each level within the target education categories is displayed in Table 1. Of our target education categories, counseling skills emerged as the category most likely to be specifically required. Out of 29 states in which addiction counselors need a credential for practice, a total of 22 (75.9%) require formal education in counseling skills, with 16 (55.2%) specifying the number of hours or course credits required. Figure 2 depicts the states by the amount of education they require in counseling skills.

Coursework in psychopathology was required by only 13 (26%) states, of which 5 (Kansas, Montana, New Jersey, North Dakota, and Oklahoma) mandated a specific number of course hours. Four states (Indiana, Maryland, Ohio, and Washington) required the topic of psychopathology to be covered without specifying the amount of hours, and four states (Arkansas, Mississippi, Vermont, and Wyoming) required counselors to meet learning objectives that made brief mention of the topic of co-occurring mental disorders. Figure 3 illustrates the states by psychopathology coursework requirement.

Very few states required addiction counselors to gain knowledge in evidence-based practice. This target educational category was required learning in only 5 (10%) states, with two states (Kansas and North Dakota) specifying the number of hours of coursework, and three states (Arkansas, Mississippi, and Vermont) listing the topic as required learning but not specifying the number of course hours. As shown in Figure 4, the vast majority of states (90%) have no requirement that addiction counselors receive formal education in evidence-based practice.

Data from the N-SSATS indicated that nation-wide, less than half of the substance abuse treatment facilities surveyed offer a minimum of one group for co-occurring mental illness. Presumably, many of the facilities that do offer treatment for co-occurring mental illness probably have extensive programming for this population, however the survey question elicited very limited information. Respondents simply checked a box if their facility offered any treatment program or group specifically tailored for clients with co-occurring mental health disorders, among a list of other special population categories (e.g. adolescents, pregnant women, veterans), (HHS, 2014). For the states requiring addiction counselors to be credentialed, the ratio of facilities offering such a group ranged from 16.4% (Hawaii) to 64.1% (Delaware). The mean within these states was 43.99%, with a standard deviation of 8.73%.

Multiple Linear Regression

Twenty-two states were excluded from the second stage of analysis because they did not require licensure or certification in order to practice addiction counseling. In most, but not all of these states, the scope of practice was limited (i.e. addiction counselors were required to work in a licensed facility), and practice typically required ongoing supervision by a credentialed professional. The remaining 28 states were included in the analysis. Six of these states, despite requiring a credential for practice, had no education requirements in any of the target categories analyzed in this study. These states were still included in the regression analysis because they met the definition of requiring a credential overall. A histogram of the substance abuse treatment facilities offering at least one treatment group for co-occurring mental disorders for the states included in the second stage of analysis is offered in Figure 5.

The purpose of the regression was to assess whether a relationship exists between the educational requirements of addiction counselors within a given state and the proportion of substance abuse treatment facilities offering services for co-occurring mental health disorders within that same state. Boxplots (Figures 6 - 8) of the percentage of facilities in each state offering co-occurring disorder treatment by target category level indicated there was likely no meaningful relationship between the education variables and the odds of facilities offering treatment for co-occurring disorders. This is evidenced by the lack of linear relationship seen, and the high degree of variability within the levels of educational requirements. The regression was still performed in keeping with the originally proposed analysis.

The three remaining target education categories (counseling skills, psychopathology, and evidence-based practice) comprised the categorical independent variables. A multiple linear regression model was estimated using the percentage of substance abuse treatment facilities offering at least one group for co-occurring mental disorders as the outcome variable. To adjust for the multiple comparisons, a Bonferroni correction was applied. The standard alpha (.05) was divided by 10 to account for the multiple comparisons of three categorical variables, one with four levels (counseling skills), and two with three levels each (psychopathology, evidence-based practice). Thus significant tests for each level comparison were considered statistically significant if the p-value was less than .005, with confidence intervals set at 99.5%.

As predicted by visual examination of the boxplots, there were no differences in the proportion of treatment facilities offering treatment for co-occurring mental disorders as a function of addiction counselor education requirements. *Minimal* requirement for

psychopathology coursework, compared with no education requirement in this category, was associated with a non-significant increase in the proportion of treatment facilities with co-occurring disorders programming (*b=2.77 99.5% CI -16.95, 22.49*), whereas *some* and *detailed* requirements were associated with a non-significant decrease in such programming compared to no requirement (*b=-1.91 99.5% CI -13.4, 9.58; b=-4.68 99.5% CI -19.31, 9.95*). Counseling skills coursework requirements labeled as *some* and *detailed* were also associated with non-significant decreases in the proportion of co-occurring mental disorder programming compared to states with no such course requirement (*b=-13.29 99.5% CI -38.43, 11.84; b=-0.95 99.5% CI -23.82, 21.95*). Evidence-based practice course requirements at the *some* level were associated with a non-significant increase in the proportion of sites offering co-occurring treatment over no requirement in this category (*b=3.33 99.5% CI -19.34, 26)* but requirements at the *detailed* level were associated with a decrease compared to no requirements for evidence-based practice (*b=-3.75 99.5% CI -22.45, 14.95*).

Discussion

Regression

The primary focus of the present study was to examine the formal education required for the practice of addiction counseling across states, specifically coursework relevant to the implementation of IDDT for individuals with co-occurring mental illness. The IDDT model for individuals with serious mental illness and substance abuse disorder was first developed more than 30 years ago, but this modality of treatment is still the exception rather than the rule. Because addiction counselors make up the majority of staff at addiction treatment facilities (McLellan & Meyers, 2004), we considered the possibility that the preparedness of these professionals to identify and work with mental illness could be associated with the likelihood that the facilities employing them would have at least some programming for individuals with co-occurring mental disorders. No such connection appears to exist, and there are several possible explanations for this.

We initially assumed that the minimum educational requirements of addiction counselors by state might serve as a proxy measure for the state's attention to addiction treatment services. This may be the case, and if so, one possible explanation for the lack of connection found between addiction counselor education requirements and programming for co-occurring mental disorders is due to the way the question was posed in the N-SSATS. The question resulted in a binary yes/no response that lacked depth of information; sites that identified having treatment programming for co-occurring disorders likely ranged from those that have only one specialized group for individuals with mild to moderate mental health diagnoses to sites with fully integrated treatment for

individuals with a range of mental health concerns. Controlling for the depth and breadth of offerings at each site may have revealed relationships between educational requirements and treatment programming for co-occurring disorders.

But it appears just as likely that the lack of connection found between educational preparation of addiction counselors and treatment programs offering programming for co-occurring mental disorders is because these variables are truly unrelated. Nearly all states require individuals providing mental health treatment to be licensed as mental health professionals (Kerwin, Walker-Smith, & Kirby, 2006). The boundaries between mental health treatment and addiction treatment are not well established, and are likely especially blurry when providing treatment to individuals who need both. Addiction treatment facilities may be reluctant to provide integrated treatment, or to offer addiction programming targeted to or adapted for individuals with mental health disorders, unless such treatment is provided by licensed mental health providers, in order to avoid running afoul of the law.

Extreme Variability in Educational Requirements

With regard to the primary focus of this study, we found extremely high variability between states in terms of their regulations of addiction counselors (e.g. whether a credential is required for practice, what credential is required, what educational preparation qualifies an individual for a credential). Summarizing the information is a challenge because there is no clear pattern to the data; what we discovered is profound variability and no clear national standards.

Two organizations, in varying degrees of competition and collaboration with each other, are presently vying for control of the development of addiction counselor training

standards, but neither has been wholly successful. NAADAC, the Association for Addiction Professionals [NAADAC] offers voluntary national credentialing, and advocates for national standards, education, policy advocacy, and research within the addiction field. Many state credentialing regulations are based in whole or in part on their model. As evidenced by the results of this study, NAADAC has been largely ineffective in their efforts to standardize training and education across states. The International Certification and Reciprocity Consortium [IC&RC] is an organization focused on certification standards at the state level, and has cobbled together a network of states and even other countries that have agreed to recognize each other's certifications in a system of reciprocity. A large number of states use IC&RC's standards, however the majority of these states only offer voluntary certification through an industry group, and therefore do not actually require IC&RC credentials for the practice of addiction counseling. Some states (e.g. California) have multiple credentials available, based on either the NAADAC or IC&RC standards respectively.

In 2005, NAADAC and IC&RC announced they were working on a merger (Knopf, 2013), but were ultimately unable to come to an agreement. Nevertheless, through the failed merger process, the organizations' standards evolved to be very similar to each other: each organization stipulates 270 hours of formal education (with slightly differing lists of required topics), 6,000 hours of supervised experience working as an addiction counselor, and successful completion of a written exam. The bulk of the training reflects the ongoing reliance on apprenticeship within the field, a model that imparts yet another layer of variability in the preparation of professionals.

States do not necessarily utilize either the NAADAC or IC&RC model in setting their minimum requirements for addiction counselors, and those that do often make changes to the organizations' requirements. Kansas, Nevada, and Oklahoma require an undergraduate degree in an approved social science field (e.g. psychology, social work, or nursing), but do not require specific courses in addiction science or counseling. Some states (e.g. Kentucky, Ohio, Texas, and Virginia) require undergraduate degrees but do not stipulate any particular major or area of study. Many, but not all, states allow applicants with specific college degrees (e.g. Arkansas, Connecticut, Louisiana, Nebraska, New York, South Dakota, and Washington) to subtract up to 4,000 hours from their supervised experience requirement. It is also common for state requirements (e.g. Maine) to suggest specific coursework that address the performance domains stipulated by NAADAC and/or IC&RC standards, but stop short of requiring all performance domains be covered; though this was more common in states that do not require a credential for practice. Some states (e.g. Missouri) offer multiple pathways to the same credentialing, based on various combinations of education and apprenticeship experience. Although few states had specific coursework requirements for the target category of evidence-based practice, many states required at least one course in cultural competency, a concept that is arguably rooted in the principle of evidence-based practice. The majority of these states used the IC&RC standards, and did not require certification for practice.

Some states require addiction counselors to be credentialed only if they worked at certain substance abuse treatment facilities, but this rule worked in opposite ways between states. In Pennsylvania, for example, addiction counselors only need to be

certified to work in licensed treatment centers, whereas in Arizona, addiction counselors only need to be certified to work in unlicensed facilities. In most professions, being *licensed* denotes a higher level of preparation than being *certified*, and within states, this was true of addiction counselors as well. Between states, however, this was not necessarily the case. Utah requires addiction counselors to be licensed, but the educational requirement for this title was an associate's degree with only two specifically required courses: human development across the lifespan, and general psychology. Notably, neither of these courses is necessarily relevant to the provision of addiction treatment. In contrast, many states (e.g. Kentucky, Nevada, and Virginia) require a bachelor's degree to qualify for the level of certified addiction counselor.

The Purpose of Credentialing

The goal of this study was to focus on the formal education requirements of addiction counselors specific to implementing IDDT for co-occurring mental illness and substance use disorders, but the inadequacy of the general training requirements we found necessitates a much broader discussion. Specifically, the extreme variability revealed between states' requirements for addiction counselors merits an analysis of the current state of affairs in light of the general rationale for credentialing professionals. In his investigation into the purpose of professional licensing, Moore (1961) determined two primary goals of credentialing: first, for the benefit and protection of the public, and second, for the benefit of the professionals via restricted access to the occupation.

In the addiction counseling field, the modern push for credentialing resulted from the financial incentive of insurance reimbursement, coupled by the insurance industry's demands for documentation of professional competence for remuneration. The current

gatekeepers of the addiction counseling profession are industry groups in most states, but in some (particularly those that require licensure), they are state agencies. The public benefit of credentialing is primarily maintained through training requirements, restrictions on practice, and in some cases, with background checks and drug screening of professionals. But the current condition of addiction counselor credentialing falls short of the goal of public protection. In many areas, individuals are able to obtain work as addiction counselors with no prior education or experience. Moreover, even in places where a credential is required, the education requirements sometimes do not cover critical topics such as evidence-based practice or even basic counseling skills.

Some of the most vulnerable consumers of addiction counseling are individuals with co-occurring mental health disorders. And rates of co-occurring disorders are very high, ranging from 40% (Center for Behavioral Health Statistics and Quality, 2016) to 72% (Shahriyarmolki & Meynen, 2014) of individuals presenting for substance abuse treatment. Identifying mental illness remains a critical need, but its importance has not been recognized by certification and licensing boards for addiction counselors. IDDT, the only evidence-based modality for the seriously mentally ill with co-occurring substance use disorders, remains unattainable if addiction counselors are not trained to recognize and appropriately respond to signs of mental illness.

Even more concerning, lax oversight of the addiction counseling field has directly contributed to client deaths at a number of facilities. An executive summary from The Justin Foundation (2007) reviewed investigation reports from the California Department of Alcohol and Drug Programs and found that from 2000-2006, failures by facilities or their staff were cited in 27 deaths, a full 40% of client deaths at substance abuse

treatment facilities for that time period. These fatal failures included staff admitting a client to detoxification without screening him for serious medical conditions (and therefore not sending him to a hospital for detoxification), (The Justin Foundation, 2007). Another report detailed a suicide committed by a treatment facility resident who repeatedly reported serious mental health symptoms, and requested to be taken to the hospital. The resident's request for hospitalization had been denied (The Justin Foundation, 2007).

Apprenticeship training of addiction counselors was appropriate when the profession consisted of little more than 12-step facilitation and therapeutic role-modeling, provided within the context of an interdisciplinary medical team. But it is unlikely to promote adoption of evidence-based practices. The nature of apprenticeship is that it occurs outside the setting of formal education, under the guidance of an established professional. A serious drawback of this approach is that training in cutting-edge technologies and emerging research in the field is often limited. Ryan, Murphy and Krom (2012) found that clinical directors of substance abuse treatment centers felt their staff needed more training in behavioral techniques and evidence-based practices, but that budgetary and time constraints limit their access. Counselors themselves have also reported not having enough time to gain experience in evidence-based practices once they are working (Kerwin, Walker-Smith & Kirby, 2013). Although some addiction counselors are presumably obtaining excellent training from facilities focused on updating best-practices, the implementation of such practices are demonstrably inconsistent across facilities and states (Duryea & Calleja, 2013), and most addiction

counselors themselves do not believe their training has prepared them to adopt evidence-based practices (Campbell, Catlin, & Melchert, 2003).

Only five states explicitly require addiction counselors to receive education in evidence-based practice. Some states specifically codify 12-step programming in training addiction counselors, even though these programs have mixed empirical support and other, more highly supported treatments (e.g. cognitive-behavioral therapy, motivational interviewing) are not required learning. In California, for example, addiction counselors are required to learn how to educate clients about AA and other 12-step programs, while in New Jersey, obtaining certification requires the applicant to attend 30 mutual-aid groups, some of which must be AA, Al-Anon Family Groups, and Narcotics Anonymous.

Protection of the public in general medical care entails the assurance that medical care meets standards for best practices. Alternative like acupuncture and homeopathy are also available options, but these are clearly differentiated from standard medical practice. In the realm of addiction treatment, the lines are far less clear. Consumers of addiction treatment services face a confusing array of treatment options, many of which are exempt from the standards of care expected of medical service delivery. It is very difficult to discern whether a facility utilizes evidence-based practice and employs knowledgeable and skillful counselors. The patchwork of credentialing requirements across states, the low standards of many credentialing boards, and the abundant loopholes in the enforcement of these standards render the public protection aspect of addiction counselor credentialing essentially worthless.

Protection of professionals through restriction of the field, the second purpose of credentialing, was the primary original purpose of credentialing for addiction counselors. The modern push for credentialing resulted from the financial incentive of insurance reimbursement, coupled by the insurance industry's demands for documentation of professional competence for remuneration. Attempts to restrict the field are blatantly evident in state requirements for practice that serve no discernable role in protecting the public, like the requirement that addiction counselors have a bachelor's degree without specifying any subject. But this aspect of credentialing, when appropriately balanced with protection of the public, serves an important function: restricting the market drives up the cost of certain services, which can serve to attract and retain good professionals to the field. The balance between the purposes of credentialing is crucial. Too much restriction to the field is bad for the public and aspiring professionals (but good for existing professionals) because it makes access to services and entry into the field too difficult and costly. Too little restriction is bad for the public and established professionals (but good for aspiring professionals) because it leaves the bar to entry into the profession low, facilitating quick and easy entry into the field, but leaving it up to consumers to try and discern the skilled practitioner from the quack.

Addiction counselors, working under the current lax and patchy regulations, are vulnerable to low pay, low prestige, low career mobility, and in many cases, lack of reciprocity across state lines. IC&RC was founded to address the issue of reciprocity, but has generally made inroads only in states where certification is voluntary, which curbs the intended impact significantly. Credentialing standardization across states would likely improve reciprocity and career mobility for addiction counselors. Low

prestige is also a barrier to career development for many addiction counselors. In the minds of many people, mutual support groups such as AA are conflated with formal addiction treatment (CASA, 2012), which leaves the impression that addiction counseling is a low-skill profession. The absence of credentialing in the field, coupled with the over-reliance on facilitation of 12-step mutual aid groups in the training of addiction counselors, furthers this confusion and adds to the perception that addiction counseling is not a worthwhile profession. The resulting combination of low pay and low rank contributes to burnout and high turnover within the field (Ryan, Murphy & Krom, 2012), which harms addiction counselors and the public.

The field as a whole could also stand to benefit from a credentialing system that operates more effectively. A unified field with consistent standards would likely be more successful lobbying for insurance reimbursement, gaining political clout and influence, forming an accreditation body for addiction counselor training programs, attracting and retaining better clinicians, improving job prospects and upward mobility for counselors, and influencing cultural beliefs about addiction and recovery. But at this time, the field is fractured, with no singular voice, lobbying body, or cultural guide, and it risks being left behind.

IC&RC does not appear to be well-positioned as the national organization. Its narrow focus is on credentialing and examination of professionals; it does not engage in or support research and development of best practices. IC&RC's website describes the procedures they follow when developing a new certification program: first, a panel of "Subject Matter Experts" is assembled to develop a list of tasks, knowledge, skills and abilities relevant to performance of the job, then a public survey is posted for additional

input, and finally a second review by Subject Matter Experts refines the list (Developing a Credential, para.2). At no point in this process is relevant research examined for inclusion; the development of credentials is based entirely on the input of individuals currently working in the field. NAADAC, for its part, is focused on advocacy, dissemination of research, and enhancement of education and best practices in the field. Its success has been stymied, however, by its national focus in a system where states independently decide the rules for credentialing professionals.

Sometimes the two main purposes of credentialing, protecting the public and protecting the professionals, are in conflict. But the needs of providers and consumers are not mutually-exclusive. Somehow, through the current fragmented system of credentialing, neither providers nor the public are getting their needs met. No matter which perspective is utilized: public protection, professional protection, and organization of the field, the current state of credentialing in addiction counselor fails to achieve its essential goal. As such, it is unclear what purpose the existing system serves.

A Field in Need of Fundamental Change

The results of this study expose failures of the addiction counseling field and state governments to adequately regulate the training and credentialing of addiction counselors, especially with regard to providing services for the vulnerable population dually diagnosed with substance abuse and mental health disorders. Various solutions to the current state of addiction counselor credentialing have been offered in the past. Mustaine, West, and Wyrick (2003) called for addiction counselors to obtain comparable training to mental health counselors (i.e. a master's degree). Miller, et al. (2010) suggested a national credentialing process was in order, and recommended merging

competing boards to reduce competition and heal the splintering of professional organizations. In 2011, Astramovich and Hoskins recommended that addiction counselors receive education in the use of research and program evaluation skills to help ensure positive clinical outcomes. Other proposals have included means to promote evidence-based practices, improve measures of clinical outcome, incentivize positive clinical outcomes, and utilize electronic health records to improve care coordination (CASA, 2012).

One of the most constant calls to action has aimed for the consistent adoption of existing national credentialing standards (i.e. IC&RC or NAADAC standards), (HHS 2016a). But the fragmented state of the professional organizations and federal institutes and bodies focused on addictions leaves the field with no single unifying organization to promote standards and advocate for addiction prevention and treatment in a highly visible and credible way (CASA, 2012).

Further, while these recommendations are warranted, they presume the maintenance of the substance abuse treatment industry outside the realm of general healthcare, a position that is increasingly being called into question. Addiction, as a disease, stands alone in the paucity of governmental oversight of its treatment. It is the only disease for which treatment is provided by untrained clinicians who are inconsistently and inadequately overseen, within programs that are often exempt from medical standards (CASA, 2012). And the licensing of addiction treatment facilities represents another arena of variability in the addiction treatment field. The factors that vary between states include whether facilities are required to be licensed, which regulatory agencies are responsible for such licensing, and the rules governing how

facilities are run (Pollio, McClendon & Reid, 2004). Such variable oversight of facilities exponentially compounds the inconsistency of educational requirements for addiction counselors.

In most states, addiction treatment facilities are licensed by a state agency that does not oversee other health care facilities; in some cases, (e.g. government-run programs, programs that are religiously affiliated), are not required to be licensed at all (SAMHSA, 2015). Other studies have documented significant variability between states, akin to that found in the present study, in licensure requirements for substance abuse treatment programs (CASA, 2012). Inconsistency in staffing requirements (e.g. the number of staff, ratio of credentialed staff, training background of staff) is common across states (CASA, 2012). And programs are rarely required to utilize evidence-based practices, or to collect, analyze, or publicize treatment outcome data; instead of focusing on these critical variables, licensure rules for substance abuse treatment facilities generally focus on non-clinical measures of quality, such as clerical efficiency and accuracy (CASA, 2012).

In reaction to the considerable systemic problems facing the addiction treatment field, calls for change have recently focused on upending the entire system. The CASA (2012) report states bluntly, “modifications to the existing system simply will not suffice to make significant, meaningful and lasting improvements in how risky substance use and addiction are addressed in the United States,” (p. 224). The training received by most addiction counselors is inadequate preparation for the implementation of evidence-based practices, which undermines the counselors’ ability to adopt such practices, or even recognize their own failure to do so (CASA, 2012). The accelerating

substance-related death rate, driven by the ongoing opiate epidemic, is now providing political impetus to challenge the status quo within the addiction counseling field, because it presents a crisis that is unlikely to be resolved within the current framework. It remains unclear, however, whether changes will be realized, and what those changes would be.

The Proposed Shift to Integrated Care

In mainstream healthcare, licensing and credentialing of professionals is clearly defined and regulated by law. Training requirements are typically extensive, and continued education in evidence-based practice is standard. Citing improved patient outcomes, large scale policy reports (e.g. CASA, 2012; HHS, 2016b) have recommended that substance abuse screening and intervention be subsumed under primary care.

The Surgeon General's recent report on addiction repeatedly referred to substance use disorders as medical conditions, and unequivocally argued for the integration of substance abuse treatment within mainstream health care (HHS, 2016b). Highlighting the interconnectivity between physical health, mental health, and substance use, the report contended that integration of care can improve outcomes, reduce health disparities, and reduce overall costs (HHS, 2016b). It specifically made the case for primary care as the headquarters of addiction recovery services, reasoning that primary care is typically the patient's strongest connection within the health care system (HHS, 2016b). The report recommends addiction be treated and managed like other chronic illnesses: through early identification of symptoms (detected by routine screening done by primary care providers), provision of brief interventions to patients showing early

signs of problematic use, referral to specialty services for more serious use, and ongoing monitoring by the patient's primary care provider (HHS, 2016b). Specialty substance use treatment would ideally be integrated with mainstream healthcare through electronic medical records, provided by highly trained staff, and supported by less trained *recovery support specialists*, a position that roughly equates to the current role of addiction counselors (HHS, 2016b).

The arguments put forth in the Surgeon General's report (HHS, 2016b) and the report by CASA (2012) make a persuasive case for the integration of substance abuse treatment with mainstream health care. But although integration may ultimately prove to be a panacea to many of the problems within the addiction counseling field, significant barriers must first be overcome. The current structure of the addiction treatment field as a whole, in a silo almost totally divorced from mainstream medicine and mental health, is clearly no longer appropriate or defensible. But the appalling state of addiction counselor credentialing should perhaps be viewed as a symptom of a bigger, more enduring problem, namely society's persistent indifference toward sufferers of addiction. This indifference manifests in a number of ways beyond the clumsy, inconsistent, and inadequate state rules that fail to ensure safe, effective treatment for all. It is also apparent in the failure of medicine and mental health care to adequately address substance use disorders within their own spheres of practice.

It is easy to criticize addiction counselors for the evident hypocrisy in their promotion of the disease model of addiction and simultaneous refusal to actually treat addictions as such (i.e. with evidence-based practices established through the scientific method). But the Surgeon General's full-throated assertion that addiction is a disease,

and that any treatment for it should be organized by primary care (HHS, 2016b), is also hypocritical in light of the lack of education medical doctors receive in the diagnosis and treatment of it. The recommendation that medicine oversee addiction treatment largely overlooks the fact that most healthcare professionals, including mental health professionals, are not appropriately trained to do so. Addiction treatment is not required learning for most social work, psychology, or medical training programs; in fact, many of these programs do not offer a single course in it (Institute of Medicine, 2006).

There is concerning evidence regarding the slowness with which doctors have incorporated even the most basic substance use screening into their practice. Over the past 20 years, fatalities resulting from interactions between prescribed medications and unknown patient substance use has increased exponentially, prompting calls by researchers to screen all patients for alcohol and drug use (Phillips, Barker & Eguchi, 2008). The CDC has made similar recommendations for medical professionals when prescribing opioids (e.g. Dowell, Haegerich & Chou, 2016). But few general health care providers screen for substance use disorders, despite tremendous risk to patient safety (CASA, 2012; Freimuth, 2008; HHS, 2016b). A study conducted by the CDC in 2011 found that only one out of four binge drinkers in the United States had ever been screened for risky drinking behavior by a healthcare professional, a ratio that had remained unchanged since 1997 (McKnight-Eily et. al., 2011).

The current state of addiction treatment in the United States may be best understood in the context of its historical development. Many of the problems in the addiction counseling field can be at least partly attributed to the pariah status the field has endured for more than 100 years. Addiction is typically seen as volitional, a

judgment that guides the underlying moral philosophy with which the general public regards the problem. Attributions of volition in mental illness have been shown to be associated with avoiding affected individuals, withholding help from them, and supporting more coercive treatment of them (Corrigan, Markowitz, Watson, Rowan & Kubiak, 2003). The addiction treatment field has itself espoused the volitional (i.e. moral) etiology of addiction through the promotion spiritual redemption as treatment, even as it fought for the recognition of addiction as a disease. Given this context, the enduring apathy that has continually plagued addiction treatment is less surprising. Today, it manifests in the lax oversight of addiction treatment services, the failure of related professions to take addictions on as a part of their purview, and the shortage of highly trained health and mental health care workers choosing to specialize in addiction treatment. And the persistence of the view that addiction is volitional likely contributes to the low prestige status of addiction treatment professions, because helping sufferers is not seen as a noble cause.

As it was more than a century ago, the scarcity of professionals who have the requisite training and desire to effectively treat substance use disorders remains a primary issue. Recent evidence suggests the availability of such providers is probably inadequate to adopt the medically guided approach recommended by the Surgeon General (Rieckmann, Kovas & Rutkowski, 2010). And although highly trained professionals have a solid foundation in translating research into clinical practice, the fact that so few have historically been willing to specialize in addiction care does not convincingly predict a sudden interest in addiction treatment from within mainstream health care.

The medical field is now promoting an updated model of addiction as a chronic disease, predicated in part on the similar relapse rates to other chronic health problems (e.g. hypertension, hypercholesterolemia), (HHS, 2016b). The hope of the chronic disease model is to combat the perception that addiction treatment does not work. Yet despite the similarities with these other health conditions, including a volitional component (e.g. unhealthy diet, lack of exercise), the problem remains that addiction is an unattractive specialization to many professionals. Changes to the law brought about by the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008 [MHPAEA], and the expansion of its provisions through the ACA may rectify some of the problems, such as low salary, that make the specialization unappealing. The MHPAEA did not mandate health insurance coverage for substance use disorders, but it imposed rules affecting health care plans that do offer such coverage. Under the law, plans covering substance use disorders must utilize the same financial requirements (i.e. deductibles) and treatment limitations for substance use disorders and mental health care as they do for medical and surgical conditions. The ACA expanded the impact of the MHPAEA by requiring most health plans and insurers to offer treatment for substance use disorders.

According to the Surgeon General's report, states that opted to expand Medicaid as part of the implementation of the Affordable Care Act (ACA) showed a dramatic improvement in the integration of substance abuse treatment and general medical care as of 2014 (HHS, 2016b). But integrated health care and addiction treatment necessitates a variety of mental health, medical, and addiction treatment professionals, not all of whom are reimbursable through Medicare in every state (HHS, 2016b). It

remains unclear whether integration will alleviate the severe workforce shortage and salary issues that plague addiction treatment generally. Further, congress has threatened to repeal of all or part of the ACA, and it is not known what effect this may have on the ongoing integration of substance abuse treatment and mainstream health care.

One possible sign of improving integration comes from the N-SSATS survey data. When the survey is conducted, facilities are asked to report whether they offer primarily substance abuse treatment, mental health treatment, a mixture of both, or other forms of treatment (e.g. general healthcare). Between 2004 and 2014, the proportion of facilities primarily focused on a mix of mental health and substance abuse treatment increased from 26% to 33% (SAMHSA, 2015). During that same period, facilities focused on strictly substance abuse treatment declined from 62% to 57%. It is not known, however, whether this data represents a normal fluctuation in the types of facilities offering substance abuse treatment, or if programs that were formerly focused on only substance abuse treatment have since expanded to include mental health care.

Recommendations

The seminal problem uncovered by this study is the failure of addiction counselor credentialing to protect the public. This failure is evident through inconsistent oversight of the field, inadequate training requirements of professionals, and scarce attention to evidence-based practices. The most vulnerable, those with co-occurring mental illness and substance use disorders, are at particular risk of negative outcomes. Formal education requirements often do not exist, and where they do, little attention is paid to topics relevant to the treatment of individuals with co-occurring disorders, despite

evidence that they make up around half to three quarters of all clients at substance use treatment facilities.

Individuals with co-occurring substance abuse and mental disorders are the most vulnerable, and need to have access to evidence-based, integrated care. The lack of standardized education and training in the addiction counseling field creates barriers to this care, and must be remedied. Ostracized from mainstream medicine since its inception, the addiction treatment field was set up for its current problems in many ways. That the field has survived and strived to provide life-saving services to others for decades despite the obstacles it faced, is a testament to the hard-working and dedicated professionals who have chosen this path. But dedication and hard work are not sufficient prerequisites for effective care. The addiction counseling field clearly needs a systemic overhaul of its credential standards if it is to evolve along with the coming changes to health care. More consistency is needed across state lines, and standards need to be based on what the relevant evidence indicates will reduce human suffering and mortality.

Although each counseling field has an apprenticeship training component, all but addiction counseling also recognize the importance of significant post-graduate education. Without the education component, apprenticeship training contributes to incompetent adoption of evidence-based practice, and slowed adaptation to new developments in treatment. But the addiction counseling field currently finds itself in a paradox with regard to credentialing. Due to the low pay and critical shortage of workers in the addictions workforce (Hoge, et al., 2013; SAMHSA, 2013), IC&RC and NAADAC are unlikely to advocate for more formal education and training for entry work in the

field. But low entry requirements and non-standardized training likely contribute significantly to the low pay in the field.

Low pay may also contribute to the depletion of expertise in the field if experienced practitioners abandon it for better prospects. The root of the problem remains that working with addiction is viewed as an undesirable and low-prestige occupation.

Because proof of expertise is generally a prerequisite for medical insurance reimbursement, addiction counselors are likely to continue to be underpaid and undertrained with the current apprenticeship training model. One potential solution would be to move toward a specialized two-year degree akin to entry-level nursing degrees, coupled with ongoing apprenticeship practice. Future studies should investigate what education and training experiences are essential to the development of professionals who are not only able to provide evidence-based practice, but equipped with the skills to integrate new research into practice across the span of their careers. For now, the lack of national leadership, fragmented professional organizations, and a medical field that is instigating a possible takeover of the addiction treatment industry, it remains unclear what role addiction counseling will play in the future of addiction treatment unless significant changes are made.

The problems within the addiction counseling field are not the only problems limiting access to IDDT. In response to the sharp increase in addiction related deaths, substance abuse treatment is an area that is now going through significant philosophical, clinical, and research development. Clinical and research knowledge needs to be developed and disseminated through an interdisciplinary network of fields,

rather than through disconnected silos of information. In order to reduce the rates of suffering and mortality, it is very likely that all related fields of health care and mental health care will need to make significant adjustments to their training and approach.

Considering the lethality of addiction, particularly when combined with mental illness, it is unacceptable that the most educated clinicians (i.e. psychologists and psychiatrists) choose not to specialize in addictions, while the least trained clinicians – those with insufficient skills to implement evidence-based practice – do. Until relatively recently, the addiction treatment field has had to do without substantive collaboration from the medical and mental health fields. Psychology, psychiatry, mental health counseling, social work, and medicine have all neglected substance abuse issues, and continue to do so by failing to adequately address the issue in their formal education programs. Because addiction is so common and cuts across all areas of mental health, prevention, screening, and treatment of addictions needs to become a core competency for all mental health professionals. It is entirely inappropriate for these fields to continue to operate with the attitude that substance use disorders are a separate problem not deserving of their full scientific and clinical attention.

Incentive programs may help encourage clinicians to obtain specialized training in addiction treatment, beyond minimum standards. The Surgeon General's report noted that addiction medicine was recently formally recognized by the American Board of Medical Specialties (HHS, 2016b). This development will hopefully facilitate an increase in the prestige of addiction work, and attract physicians to the field. Grants supporting research into effective addiction treatment may expand the range of evidence-based

treatments while simultaneously attracting more researchers to work on improving addiction care.

Mental health and general health providers will need to approach their new role in addiction treatment with humility, and listen to the experts currently working in addiction treatment. Individuals suffering from addiction have long endured contemptuous relationships with practitioners in mainstream medicine and mental health care. It is crucial that professionals from these fields give respect and attention to the lessons learned from this discordant history, or they run the risk of alienating the very people they hope to treat.

Future Directions

One silver lining to the lax and variable credentialing standards for addiction counselors is that it provides an opportunity for researchers to examine the role of training and education on counselor competence. Specifically, future research should examine the essential competencies and skills required to competently adopt evidence-based practice, and to integrate new research findings into existing clinical practice. Although IC&RC and NAADAC respectively espouse a specific course of training, the training recommendations have not been systematically examined with regard to client outcomes. With specific regard to IDDT, the core competencies of addiction counselors working with individuals who are also mentally ill should be examined, and guidance about what role addiction counselors should play in mental health care should be more clearly established. Likewise, research should clarify what training other mental health and medical care professionals need in order to recognize and respond to substance use disorders effectively.

From a policy standpoint, future changes to the regulation of the field of addiction counseling should be critically analyzed by the effect they are likely to have on the protection of the public. Individuals with addiction, particularly those with co-occurring mental health conditions, are particularly vulnerable, and may have diminished capacity to advocate for their needs on policy issues related to their care. Given that the addiction treatment field does not have a single unified organization overseeing regulation efforts, it is recommended that this ongoing policy research be conducted and publicized by SAMHSA. Ongoing examination of the role of separate funding streams for mental health care, medical care, and addiction treatment will be important for the development of future policy directions, particularly in the case of a repeal of the ACA.

On the philosophical level, future research can expound the effect of the chronic disease model of addiction on cultural beliefs about addiction, and on the effect this model has on sufferers of addiction. The proposed treatment model in which primary care acts as a screen for addictions, coordinator of services, and monitor of recovery, will also require significant attention from researchers if and when it is implemented.

Limitations

This study was limited in its narrow focus on four specific target educational topics related to IDDT. We did not specifically examine all educational requirements, other training requirements (e.g. apprenticeship training hours, supervision requirements, examinations), or higher levels of credentialing other than the absolute minimum required for practice. Although it was not formally analyzed in this study, required supervised hours working as an addiction counselor ranged widely from

zero hours (Wyoming) to 6,000 hours (multiple states) for entry-level credentialing. States were also causally observed to have significant variability in their recognition of training received in related fields, with some states offering addiction counselor credentials to mental health counselors with little more than a test, and others requiring supervised hours of practice. States also appeared to vary with regard to which professionals may supervise addiction counselors, with some requiring addiction specialists, and others satisfied with any mental health counselor, regardless of whether the supervisor had specific training in addiction treatment. A broader scope would certainly have revealed significantly more variability than we found, between various professionals even within the same state.

Although a narrower focus often allows a more targeted investigation of a phenomenon, it can also be detrimental if it is premature. That appears to be the case in this study. The research attempted to elucidate the effect addiction counselor training could be having on the implementation of IDDT programs. The problem is significantly broader in scope than we realized, based in part on the assumption that basic training for addiction counselors was at least generally adequate. This assumption, which was proven wrong by our findings, inadvertently provides very useful information not just about the state of addiction treatment itself, but also to the ignorance within the field of psychology about addiction treatment generally, and operations of the addiction treatment field specifically. If we were confused and misinformed about the state of addiction treatment in the United States, presumably most individuals seeking care are also confused and misinformed.

Other studies have examined the role of treatment center licensing, but we did not. Including this topic, and specifically researching the related staffing rules by state likely would provide useful data to examine more specifically the role these requirements play in shaping state-wide policies about addiction counselor credentialing.

Finally, the survey data relied upon for this study was self-reported, and the question about care for co-occurring disorders was vague and broad, which likely resulted in an outcome measure that lacked enough specificity to answer one of our exploratory questions. Namely, whether educational requirements in related topics increased the ratio of treatment facilities in a given state offering treatment for co-occurring disorders.

Tables and Figures

Table 1

Percentage (number) of states with minimum requirements at each level of target education categories

	Level of requirement			
Target category	None	Minimal	Some	Detailed
Counseling Skills	56% (28)	0% (0)	12% (6)	32% (16)
Psychopathology	74% (37)	8% (4)	8% (4)	10% (5)
Evidence-Based Practice	90% (45)	0% (0)	6% (3)	4% (2)

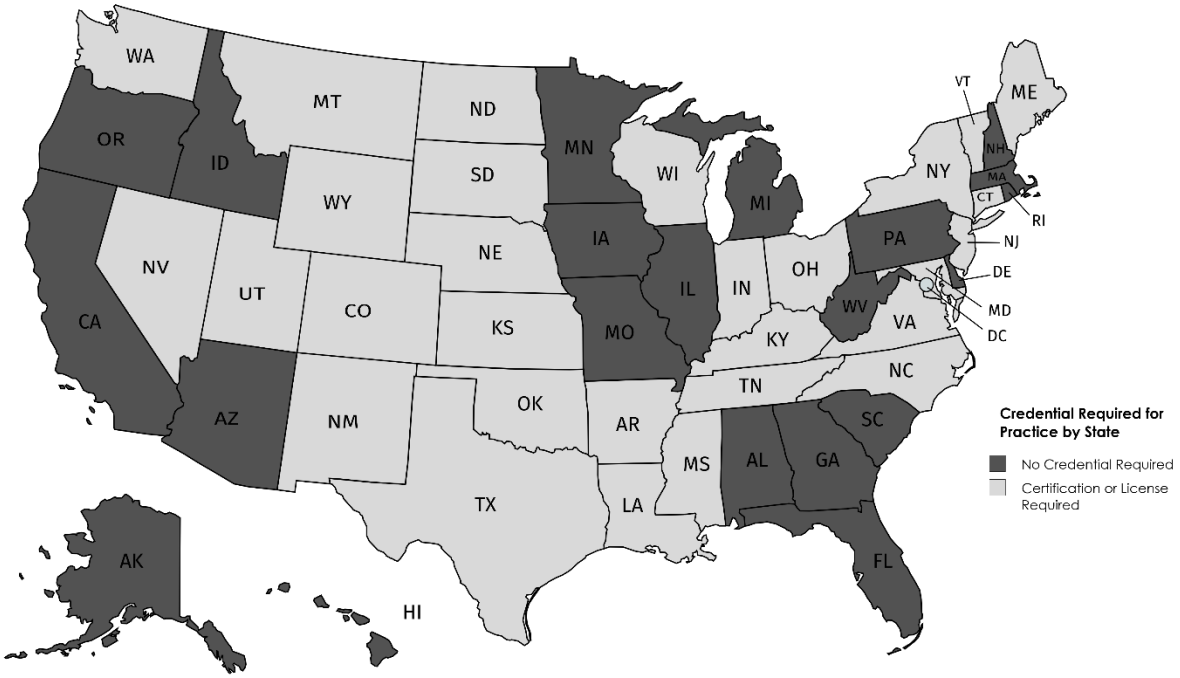

Figure 1

Any credential (certification or licensure) required for practice of addiction counseling by state.

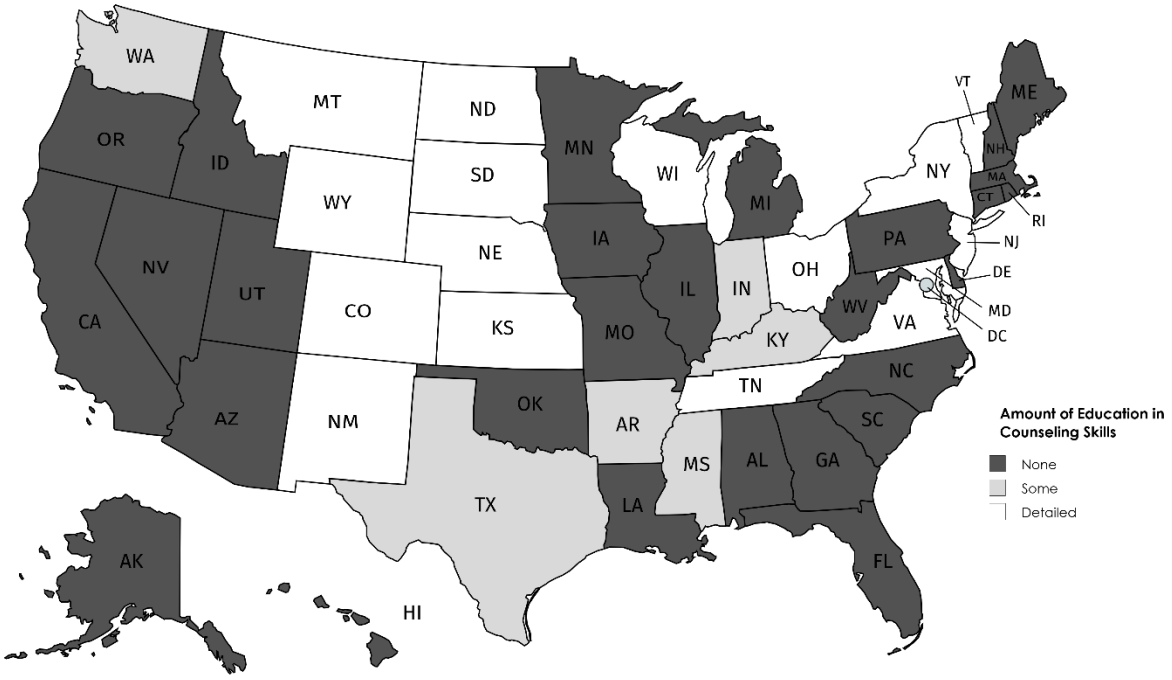

Figure 2

Amount of education in counseling skills required to work as an addiction counselor by state.

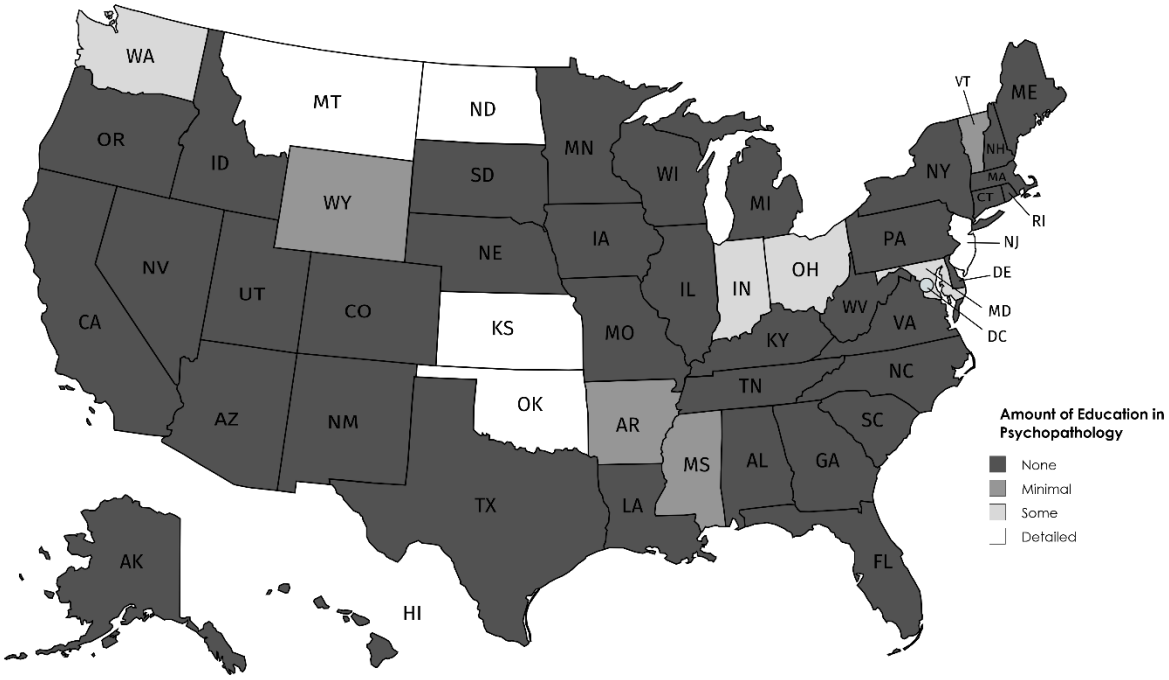

Figure 3

Amount of education in psychopathology / co-occurring mental illness and addiction required to work as an addiction counselor by state.

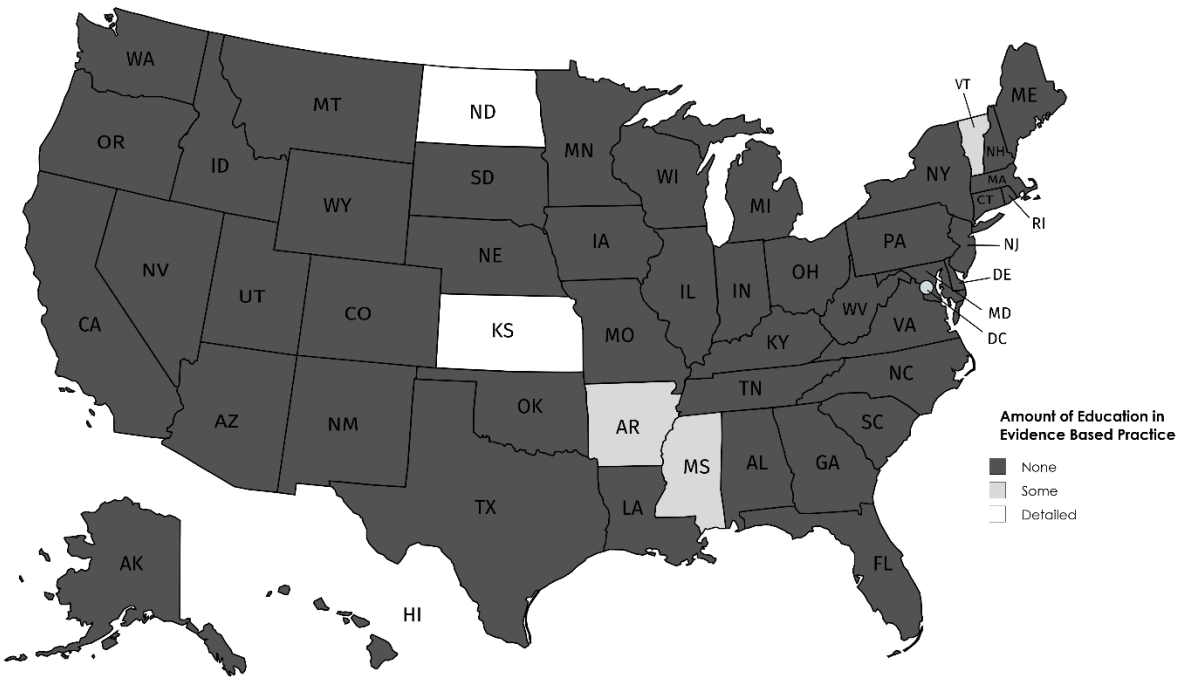

Figure 4

Amount of education in evidence-based practice required to work as an addiction counselor by state.

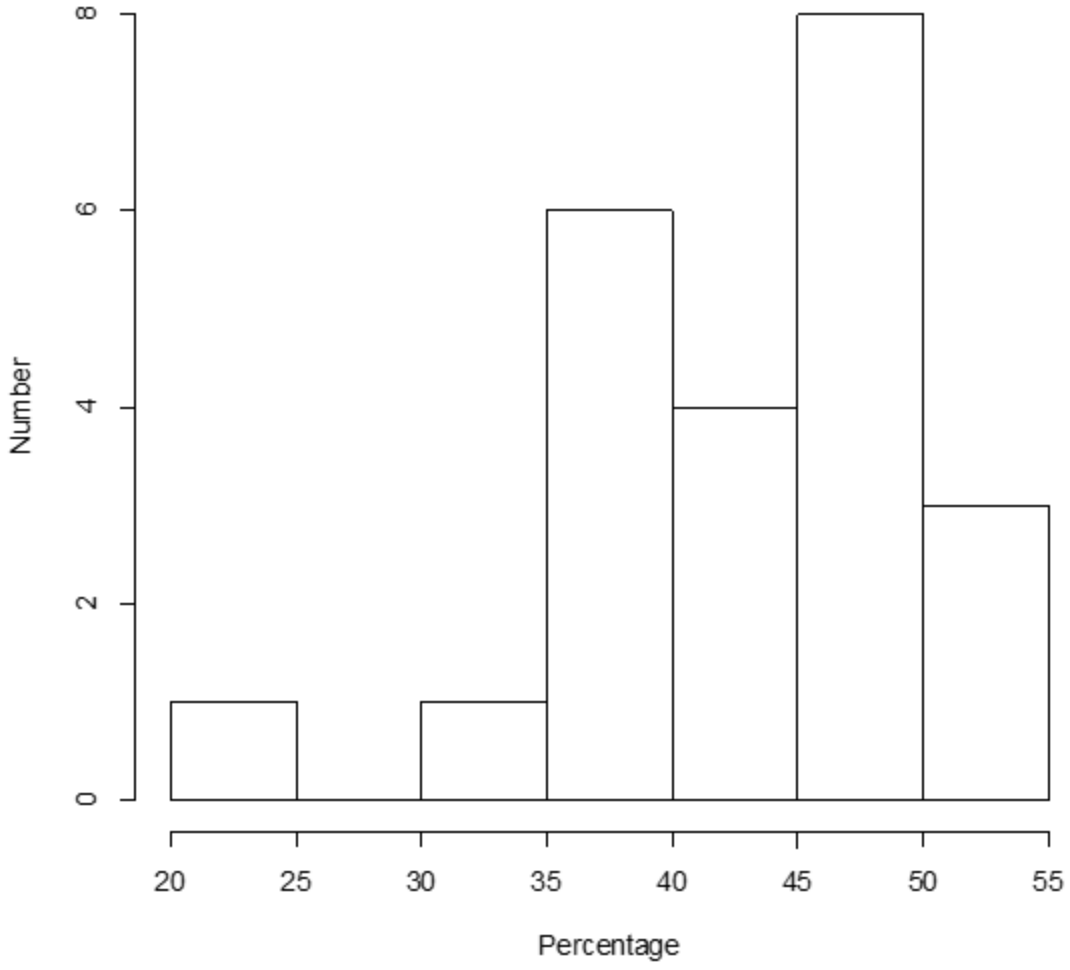

Figure 5

Facilities offering at least one specialized treatment group for co-occurring mental health disorders within states requiring credentialing of addiction counselors.

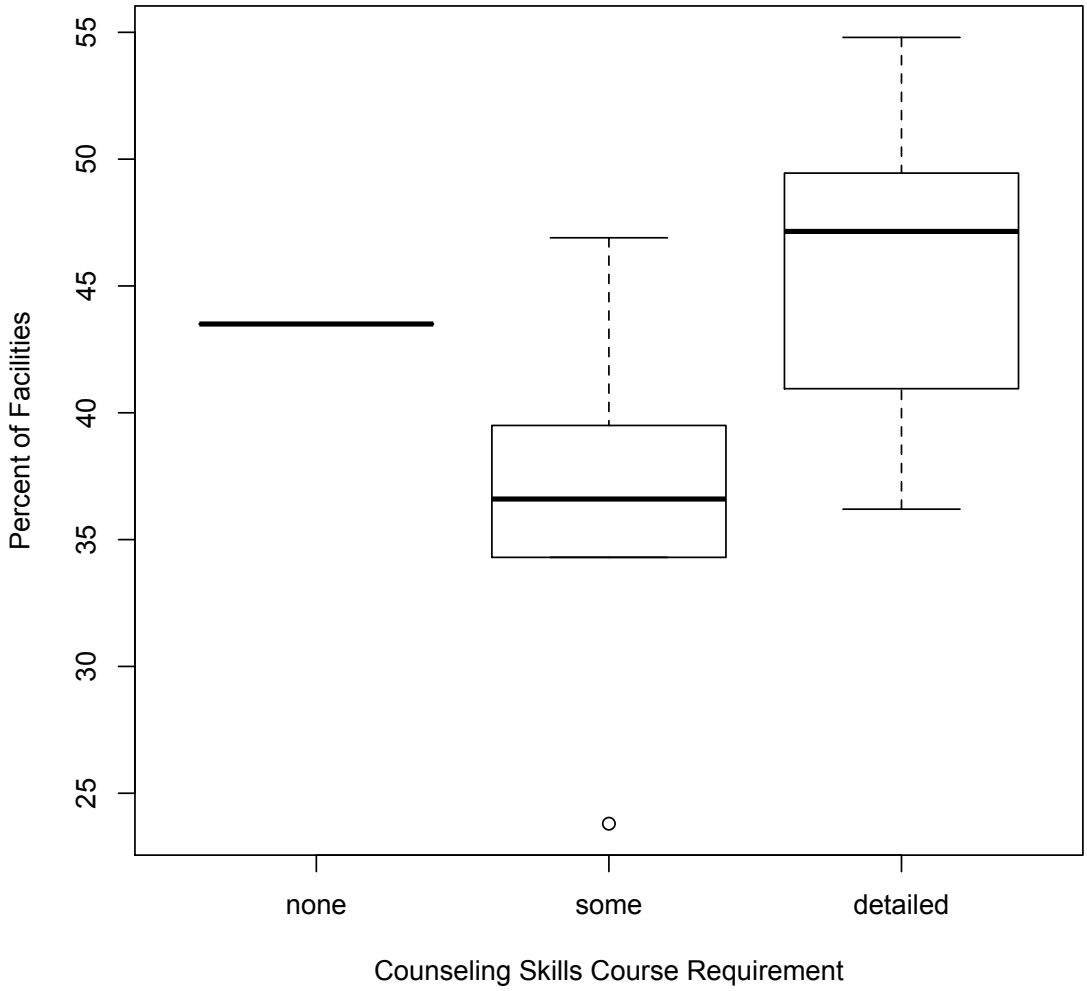

Figure 6

Histogram of the percent of states' substance abuse treatment facilities offering treatment for co-occurring mental disorders by the level of required coursework in counseling skills for addiction counselors in the state.

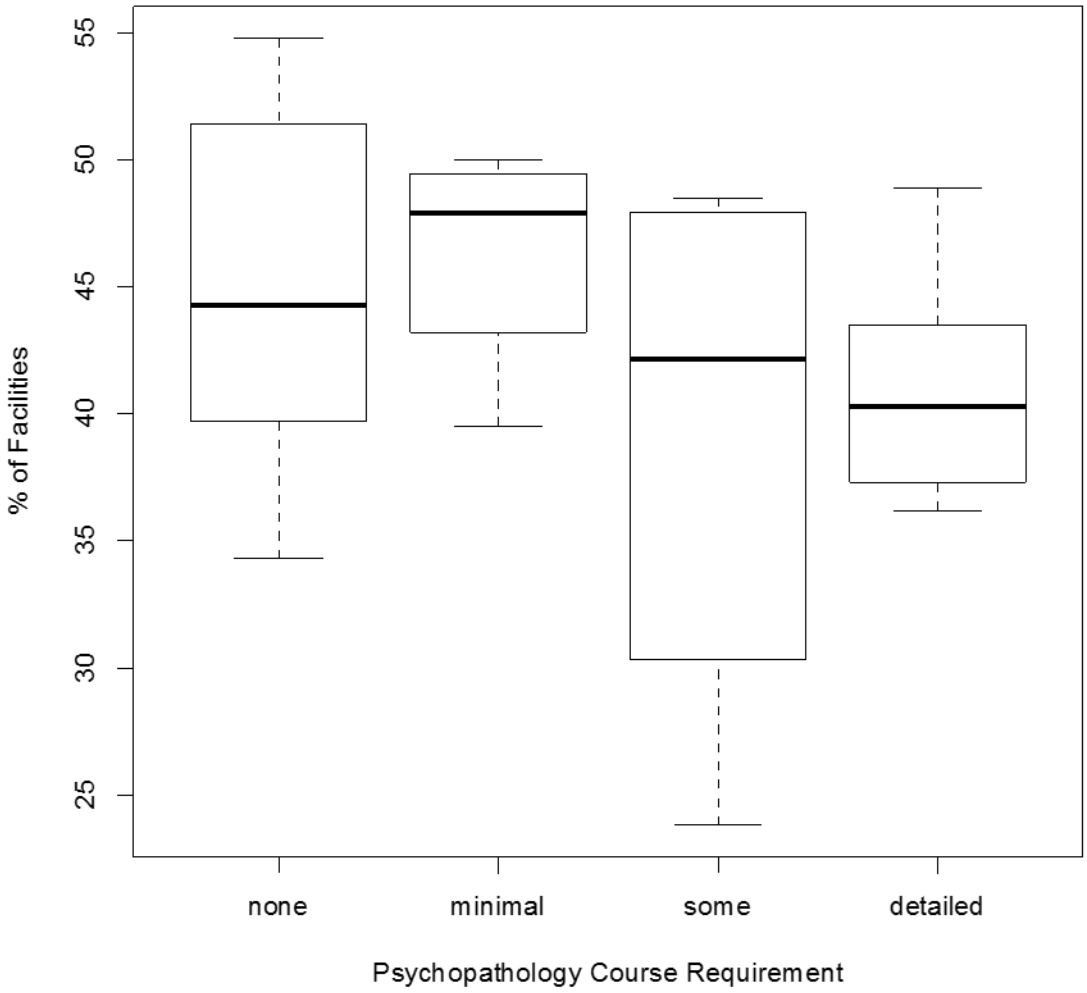

Figure 7

Histogram of the percent of states' substance abuse treatment facilities offering treatment for co-occurring mental disorders by the level of required coursework in psychopathology for addiction counselors in the state.

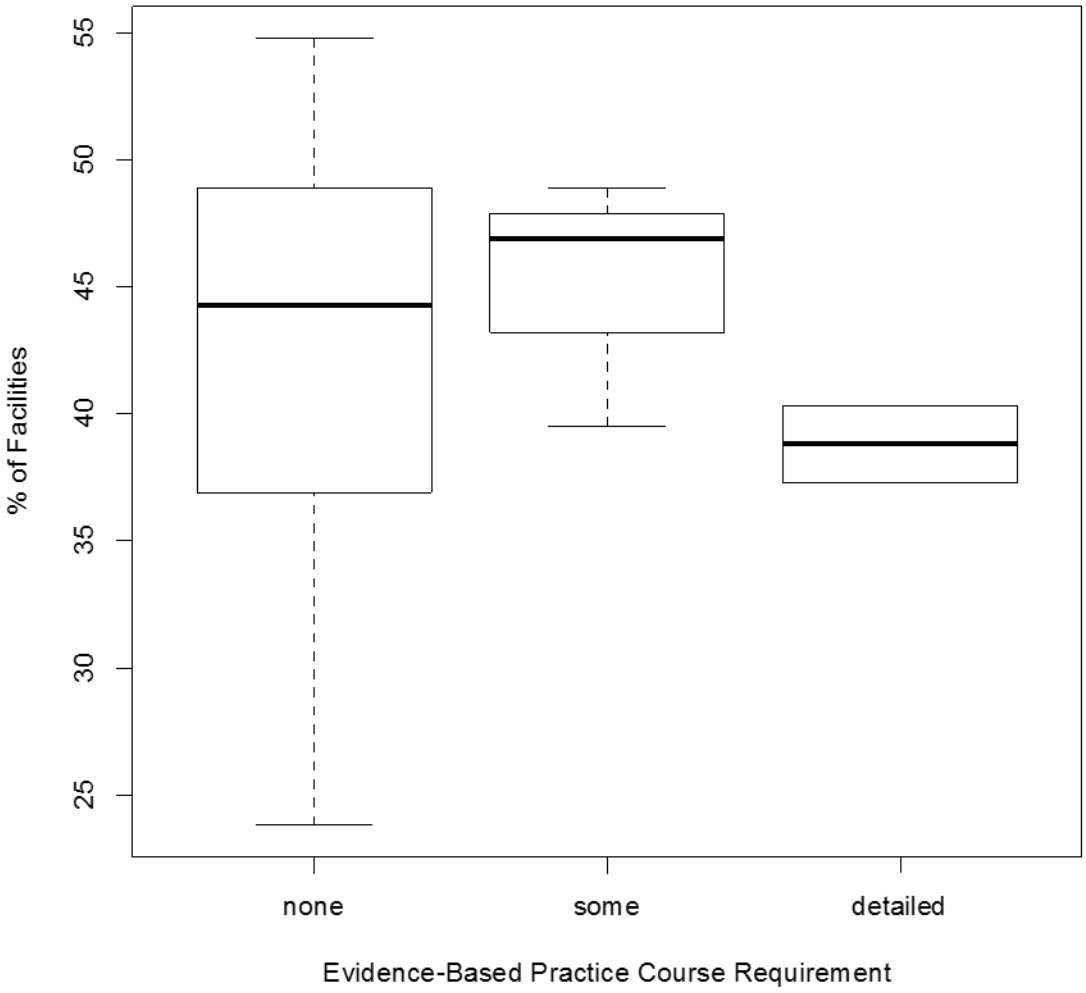

Figure 8

Histogram of the percent of states' substance abuse treatment facilities offering treatment for co-occurring mental disorders by the level of required coursework in evidence-based practice for addiction counselors in the state.

References

Ager, R., Roahen-Harrison, S., Toriello, P. J., Kissinger, P., Morse, P., Morse, E., Carney, L., & Rice, J. (2011). Predictors of adopting motivational enhancement therapy. *Research on Social Work Practice, 21*(1), 65-76.

Arkansas Substance Abuse Certification Board. (n.d.) *ASACB Policy and Procedure Manual*. Retrieved from http://nebula.wsimg.com/efabbf33b8cc8f3da86d44409af0f800?AccessKeyId=3F38EBC78AF838C2F41D&disposition=0&alloworigin=1

Astramovich, R. L., & Hoskins, W. J. (2011). Evaluating addictions counseling programs: Promoting best practices, accountability, and advocacy. *Journal of Addictions & Offender Counseling, 34*, 114-124.

Blocker, J. S. (1988). *American Temperance Movements Cycles of Reform.* Boston: Twayne Publishers.

Board of Alcohol and Drug Counselors. (n.d.) Retrieved on 12/15/15 from http://adc.ky.gov/Pages/default.aspx

Boffey, P. M. (1982). Showdown nears in feud over alcohol studies. *The New York Times*. Retrieved from http://www.nytimes.com/1982/11/02/science/showdown-nears-in-feud-over-alcohol-studies.html?pagewanted=all

Campbell, T. C., Catlin, L. A., & Melchert, T. P., (2003). Alcohol and other drug abuse counselors' attitudes and resources for integrating research and practice. *Journal of Drug Education, 33,* 307-323.

Center for Behavioral Health Statistics and Quality. (2016). *2015 National Survey on Drug Use and Health: Detailed Tables*. Substance Abuse and Mental Health

Services Administration, Rockville, MD. Retrieved from http://www.samhsa.gov/data/sites/default/files/NSDUH-DetTabs-2015/NSDUH-DetTabs-2015/NSDUH-DetTabs-2015.pdf

Center for Substance Abuse Treatment. (2005). Substance abuse treatment: Group therapy. *Treatment improvement protocol (TIP) series, No. 41.* Rockville, MD: Substance Abuse and Mental Health Services Administration.

Centers for Disease Control and Prevention. (2015). *Vital signs: Demographic and substance use trends among heroin users – United States, 2002-2013.* Atlanta, GA: Jones, C.M., Logan, J., Gladden, R.M., & Bohm, M.K. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6426a3.htm

Centers for Disease Control and Prevention. (2016a). *Increases in drug and opioid overdose deaths – United States, 2000-2014.* Atlanta, GA: Rudd, R.A., Aleshire, N., Zibbell, J.E., & Gladden, R.M. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6450a3.htm?s_cid=mm6450a3_w

Centers for Disease Control and Prevention. (2016b). *Increases in drug and opioid overdose deaths – United States, 2000-2015.* Atlanta, GA: Rudd, R.A., Seth, P., David, F., & Scholl, L. Retrieved from https://www.cdc.gov/mmwr/volumes/65/wr/mm655051e1.htm

Certification. (n.d.) Retrieved on 12/19/2015 from http://www.adacbga.org/certinfo

Chandler, D. (2009). Implementation of integrated dual disorders treatment in eight California programs. *American Journal of Psychiatric Rehabilitation, 12*, 330-351.

Chiauzzi, E. J., & Liljegren, S. (1993). Taboo topics in addiction treatment: An empirical review of clinical folklore. *Journal of Substance Abuse Treatment, 10*, 303-316.

Cohen, A. (2015). How White users made heroin a public-health problem. *The Atlantic.* Retrieved from http://www.theatlantic.com/politics/archive/2015/08/crack-heroin-and-race/401015/

Connecticut Certification Board, Inc. (2013). *Certified Addiction Counselor Application*. Retrieved on 12/07/15 from https://www.ctcertboard.org/files/pdfs/CAC%20Application.pdf

Corrigan, P., Markowitz, F. E., Watson, A., Rowan, D. & Kubiak, M. A. (2003). An attribution model of public discrimination towards persons with mental illness. *Journal of Health and Social Behavior, 44*(2), 162-179.

Crosby, J. (2016). Simon & Schuster to market Hazelden books. *Star Tribune*. Retrieved from http://www.startribune.com/simon-schuster-to-market-hazelden-books/387006931/

Developing a Credential. (n.d.) Retrieved on 1/16/17 from http://www.internationalcredentialing.org/creds

Dickens, B.M., Doob, A.N., Warwish, O.H., & Winegard, W.C. (1982). *Report of the Committee of Enquiry into Allegations Concerning Drs. Linda and Mark Sobell.* Toronto: Addiction Research Foundation.

Dowell, D., Haegerich, T. M., & Chou, R. (2016). CDC guideline for prescribing opioids for chronic pain – United States. *MMWR, 65*(1), 1-49.

Duryea, D. G., & Calleja, N.G. (2013). Current expectations and existing deficits among addiction specialists. *Alcoholism Treatment Quarterly, 31*(2), 254-269.

Ferri, M., Amato, L., & Davoli, M. (2006). Alcoholics Anonymous and other 12-step programmes for alcohol dependence. *Cochrane Database Syst Rev. 19*(3).

Hersey, B. (2001). The controlled drinking debates: A review of four decades of acrimony. *Addiction, Pain & Public Health.* Retrieved from http://www.doctordeluca.com/Library/AbstinenceHR/FourDecadesAcrimony.htm

Hoge, M. A., Stuart, G. W., Morris, J., Flaherty, M. T., Paris, Jr., M., & Goplerud, E. (2013). Mental health and addiction workforce development: Federal leadership is needed to address the growing crisis. *Health Affairs, 32*(11), 2005-2012.

Hseih, H., Shannon, S.E. (2005). Three approaches to content analysis. *Qualitative Health Research, 15*(9), 1277-1288.

Institute of Medicine, & Committee on Crossing the Quality Chasm. (2006). *Improving the quality of health care for mental and substance-use conditions.* Washington, DC: National Academies Press.

International Certification & Reciprocity Consortium. (n.d.) *Candidate Guide for the IC&RC Alcohol and Drug Counselor Examination*. Retrieved from http://internationalcredentialing.org/Resources/Candidate%20Guides/ADC_CandidateGuide_1-2015.pdf

Keller, M., (1952). The definition of alcoholism and the estimation of its prevalence. In D.J. Pittman & R.C. Snyder, Eds. *Society, Culture and Drinking Patterns.* New York: John Wiley and Sons.

Kerwin, M.E., Walker-Smith, K., & Kirby, K. (2006). Comparative analysis of state requirements for the training of substance abuse and mental health counselors. *Journal of Substance Abuse Treatment, 30*, 173-181.

Knopf, A. (2013). NAADAC, IC&RC to Collaborate for Survival of Field. *Addiction Professional*. Retrieved from http://www.addictionpro.com/article/naadac-icrc-collaborate-survival-field

Kochanek, K.D., Murphy, S.L., Xu, J.Q., & Tejada-Vera B. (2016). Deaths: Final data for 2014. *National Vital Statistics Reports, 65*, 4. Hyattsville, MD: National Center for Health Statistics.

Kola, L.A., & Kruszynski, R. (2010). Adapting the integrated dual-disorder treatment model for addiction services. *Alcoholism Treatment Quarterly, 28*, 437-450.

Lemanski, M. (2001). *A History of Addiction and Recovery in the United States.* Tucson: Sharp Press.

Lundgren, L., Amodeo, M. Krull, I., Chassler, D., Weidenfeld, R., de Saxe Zerden, L., et al. (2011). Addiction treatment provider attitudes on staff capacity and evidence-based clinical training: Results from a national study. *American Journal on Addictions, 20*(3), 271-284.

Marlatt, A. (1985). Controlled drinking: The controversy rages on. *American Psychologist, 40*(3), 374-375.

Mayring, P. (2000). Qualitative content analysis. *Forum: Qualitative Social Research.* Retrieved from: http://www.qualitative-research.net/index.php/fqs/article/view/1089/2385

McGovern, M. P. (2003). Evidence-based practices for substance use disorders. *Psychiatric Clinics of North America, 26*(4), 991-1010.

McKnight-Eily, L.R., Liu, Y., Brewer, R.D., Kanny, D., Lu, H., Denny, C.H., Balluz, L., & Collins, J. (2014). Centers for Disease Control and Prevention. Vital signs:

Communication between health professionals and their patients about alcohol use - 44 states and the District of Columbia, 2011. *Morbidity and Mortality Weekly Report, 63*(1), 16-22.

McLellan, A. T., Lewis, D. C., O'Brien, C. P., & Kleber, H. D. (2000). Drug dependence, a chronic medical illness: Implications for treatment, insurance, and outcomes evaluation. *JAMA, 284*(13), 1689-1695.

McLellan, A. T., & Meyers, K. (2004). Contemporary addiction treatment: A review of systems problems for adults and adolescents. *Biological Psychiatry, 56*(10), 764-770.

Miller, G. (2015). *Learning the Language of Addiction Counseling.* (4th ed.) New Jersey: John Wiley & Sons.

Miller, G., Scarborough, J., Clark, C., Leonard, J. C., & Keziah, T. B. (2011). The need for national credentialing standards for addiction counselors. *Journal of Addictions and Offender Counseling,* 30(2), 50-57.

Moore, T. G. (1961). The purpose of licensing. *The Journal of Law & Economics,* 4, 93-117.

Mustaine, B.L., West, P.L., & Wyrick, B.K. (2003). Substance abuse counselor certification requirements: Is it time for a change? *Journal of Addictions & Offender Counseling, 23*, 99-107.

NAADAC, 2010. Integrating Treatment for Co-Occurring Disorders: An Introduction to What Every Addiction Counselor Needs to Know [Presentation Handout]. Retrieved from http://www.naadac.org/integratingco-occurringdisorders-anintroductiontowhateveryaddictioncounselorneedstoknow

Peele, S. (1986). The dominance of the disease theory in American ideas about and treatment of alcoholism. *American Psychologist, 41*(3), 232-324.

Phillips, D. P., Barker, G. E., & Eguchi, M. M. (2008). A steep increase in domestic fatal medication errors with use of alcohol and/or street drugs. *Archives of Internal Medicine, 168*(14), 1561-1566.

Pollio, D. E., McClendon, J., & Reid, D. (2004). Certification and program regulations for inpatient services to youth with addiction: A state-level analysis. *Journal of Psychoactive Drugs, 36*(4), 499-509.

Rieckmann, T., Kovas, A. E., & Rutkowski, B. A. (2010). Adoption of medications in substance abuse treatment: Priorities and strategies of single state authorities. *Journal of Psychoactive Drugs, 42*(6), 227-238.

Robertson, N. 1988. *Getting Better Inside Alcoholics Anonymous*. New York: Wm. Morrow.

Roman, Paul M., & Johnson J. A., 2004. National Treatment Center Study Summary Report: Private Treatment Centers. Athens, GA: Institute for Behavioral Research, University of Georgia.

Rush, B. (1823) *An Inquiry into the Effects of Ardent Spirits upon The Human Body and Mind with an Account of the Means of Preventing, and of the Remedies for Curing Them.* 8th ed. Boston: James Loring.

Ryan, O., Murphy, D., & Krom, L. (2012). Vital signs: Taking the pulse of the addiction treatment workforce, *A National Report, Version 1.* Kansas City, MO: Addiction Technology Transfer Center National Office in residence at the University of

Missouri-Kansas City. Retrieved from http://www.nattc.org/files/VitalSignsReport.pdf

Substance Abuse and Mental Health Services Administration. (2007). *An Action Plan for Behavioral Health Workforce Development.* Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved from http://www.samhsa.gov/workforce/annapolis/workforceactionplan.pdf

Substance Abuse and Mental Health Services Administration. (2013). *Report to Congress on the nation's substance abuse and mental health workforce issues*. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Substance Abuse and Mental Health Services Administration, *National Survey of Substance Abuse Treatment Services (N-SSATS): 2014.* (2015). *Data on Substance Abuse Treatment Facilities.* Rockville, MD: Substance Abuse and Mental Health Services Administration.

Schulte, S. J., Meier, P. S., Stirling, J., Berry, M. (2010). Dual diagnosis competency among addiction treatment staff: Training levels, training needs and the link to retention. *European Addiction Research,16*, 78-84.

Shahriyarmolki, K., Meynen, T. (2014). Needs assessment of dual diagnosis: A cross-sectional survey using routine clinical data. *Drugs: Education, Prevention and Policy, 21*(1), 43-49.

Sobell, M.B., & Sobell, L.C. (1976). Second year treatment outcome of alcoholics treated by individualized behavior therapy: Results. *Behaviour Research and Therapy 14,* 195-215.

The Justin Foundation (2007). *The War on Addiction: Inadequate Regulation, Standards and Oversight Allow Untrained, Unskilled and Unethical Counselors to Jeopardize Lives, Health and Recovery.* [Executive Summary]. Retrieved from http://www.thejustinfoundation.org/documents/AmendedWebSiteReport_000.pdf

The National Center on Addiction and Substance Abuse at Columbia University (2012). *Addiction Medicine: Closing the Gap between Science and Practice.* New York: CASA. Retrieved from http://www.centeronaddiction.org/addiction-research/reports/addiction-medicine

Thombs, D. L., & Osborn, C. J., (2001). A cluster analytic study of clinical orientations among chemical dependency counselors. *Journal of Counseling & Development, 79*(4), 450-458.

U.S. Department of Health and Human Services. (2014). *National Survey of Substance Abuse Treatment Services.* [Survey]. Retrieved on 12/15/15 from https://wwwdasis.samhsa.gov/dasis2/nssats/nssats_2014_q.pdf

U.S. Department of Health and Human Services. (2016b). Facing addiction in America: The Surgeon General's report on alcohol, drugs, and health. Retrieved from https://addiction.surgeongeneral.gov/surgeon-generals-report.pdf

U.S. Department of Health and Human Services. (2016a). *Surgeon General Issues Landmark Report on Alcohol, Drugs and Health* [Press release]. Retrieved on December 12, 2016 from http://www.hhs.gov/about/news/2016/11/17/surgeon-general-issues-landmark-report-alcohol-drugs-and-health.html.

Volkow, N.D. (2014). America's addiction to opioids: Heroin and prescription drug abuse. Senate Caucus on International Narcotics Control: National Institute on

Drug Abuse. Retrieved from https://www.drugabuse.gov/about-nida/legislative-activities/testimony-to-congress/2015/americas-addiction-to-opioids-heroin-prescription-drug-abuse

White, W.L. (2012). Recovery/remission from substance use disorders: An analysis of reported outcomes in 415 scientific reports, 1868-2011. Philadelphia, PA: Philadelphia Department of Behavioral Health and Intellectual Disability Services.

White, W.L. (2014). *Slaying the Dragon: The History of Addiction Treatment and Recovery in America* (2nd Ed.). Bloomington, IL: Chestnut Health Systems.

White, W.L., & Miller, W.R. (2007). The use of confrontation in addiction treatment: History, science and time for change. *Counselor, 8*(4), 12-30.

Wieder, B.L., & Kruszynski, R. (2007). The salience of staffing in IDDT implementation: One agency's experience. *American Journal of Psychiatric Rehabilitation, 10*(2), 103-112.

Woo, S.M., Hepner, K.A., Gilbert, E.A., Osilla, K.C., Hunder, S.B., Munoz, R.F., Watkins, K.E. (2013). Training Addiction Counselors to Implement an Evidence-Based Intervention: Strategies for Increasing Organizational and Provider Acceptance. *Cognitive and Behavioral Practice, 20*, 232-244.