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Substance Use Disorders and Stigma

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Abstract

Stigma is a problem for persons with substance abuse addictions and impacts access to health care services. The purpose of this project was to examine an educational program's effectiveness in reducing stigmatizing attitudes of health care professionals towards persons with substance abuse addictions. An educational program including a PowerPoint on substance abuse and stigma was presented to one group of nursing students and one group of Registered Nurses in a nurse residency program and pre-tests and post-tests completed. Results were calculated utilizing the paired samples *t*-test. At the < 0 .05 level for a 2-tailed test only pairs seven, eight, and nine of the pre-test and post-test answers were statistically significant. Recommendations for future practice include educational programs targeting health care professionals. Stigma, social distance and discrimination are major obstacles to persons with addictions in obtaining mental health services.

Key words: stigma, substance abuse, addictions.

Executive Summary

Substance Abuse Addictions and Stigma

Problem Identification

Stigma is a significant barrier for persons with substance abuse addictions for assessing health care and substance abuse treatment services. Health-care providers may hold negative beliefs about persons with substance abuse disorders such that they "overuse system resources, are not vested in their own health, abuse the system through drug-seeking and diversion, and fail to adhere to recommended care" (Livingston, Milne, Fang & Amari, 2011, p. 40).

Purpose

The purpose of this project was to examine an educational program's effectiveness in reducing stigmatizing attitudes of health care professionals towards persons with substance abuse addictions.

Goals

The goals of the capstone project were to present an educational program aimed at health care professionals and reduce stigmatizing attitudes of health care professionals.

Objectives

Objectives were the reduction of stigmatizing and degrading attitudes of health care professionals, thereby preventing decreased mental and physical health service utilization by persons with substance abuse addictions. The short term objectives were to increase awareness, reduce stigmatizing attitudes of health care professionals, and increase empathy towards persons with substance abuse addictions by health care providers.

Plan

The Logic Model and SWOT analysis was completed and approval by the ethics boards from Regis University, the regional medical center, and the local community college were obtained. The educational presentation and PowerPoint on *Substance Use Disorders and Stigma* was presented to both Registered Nurses (RN's) in the Nurse Residency Program and students in the community college nursing program.

Outcomes and Results

Participants completed the pre-tests and post-tests and data was imputed into the SPSS statistical software. The *t*- test for dependent groups was conducted. The independent variable was pre-exposure and post-exposure to the educational program on substance abuse addictions and stigma. The dependent variables were responses to the pre-test questions and responses to the post-test questions. At the < 0 .05 level for a 2-tailed test only pairs seven, eight, and nine were statistically significant. Question seven suggested if most employers would hire someone who has been treated for substance abuse addiction if he/she was qualified for this position (.005). Question eight asked about being willing to have someone as a close friend who has been treated for substance abuse (.003). Question nine stated persons with substance abuse are generally not responsible citizens (.041). Results indicated this one hour educational program modified only three out of ten questions on the pretest/posttest. However this also suggests stigma is an important factor for consideration in patient care.

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Substance Use Disorders and Stigma

This paper presents the capstone project on substance use disorders and stigma. The purpose of this study was to examine an educational program's effectiveness in reducing stigmatizing attitudes of health care professionals towards persons with substance abuse addictions. Stigma contributes to adverse outcomes for persons with substance abuse disorders including "poor mental and physical health, non-completion of substance use treatment, delayed recovery and reintegration processes and increased involvement in risky behaviors" (Livingston, Milne, Fang & Amari, 2011). Substance abuse stigma is a significant barrier for assessing health care and substance abuse treatment services (2011). Substance abuse disorders are considered chronic diseases.

Problem Recognition and Definition

Substance Dependence as a Chronic Disease

Hartwell, Brady, Oslin, and Hermann (2012) write accumulating evidence supports substance dependence as a chronic disease. "Studies have found that 40-60 percent of patients treated for alcohol or other drug dependence return to active use within a year following treatment" (p. 1). Periods of "problematic use" and associated functional impairment often occur for many years after the initial diagnosis of dependence. "The conceptualization of substance dependence as a chronic disease is supported by comparison of its diagnostic criteria, etiologic factors (genetic and environmental), pathophysiology, and response to treatment with other chronic mental illnesses (e.g., type II diabetes mellitus, asthma, and hypertension)" (p. 2). The authors note lifelong treatment is an expectation for other chronic diseases such as asthma and diabetes, however substance abuse treatment has centered on acute episodes of care, which are "time limited and carry an unrealistic expectation of enduring outcomes" (p. 2). Periodic relapses are

associated with substance abuse. “Alcohol and drug abuse remain a global health problem despite the efforts in legislative control, prevention, treatment and rehabilitation intervention strategies” (Rassool, 2007, p. 61). Stigma associated with substance abuse, is considered a major barrier to persons with substance abuse addictions seeking psychological treatment and psychiatric recovery.

Definitions and Types of Stigma

“Stigma” is an “ancient Greek word, referring to a tattoo, mainly used to mark unruly slaves and criminals often on the forehead” (Lloyd, 2013, p.85). Lloyd notes the word was increasingly used to denote branding with a hot iron and even in ancient times was used metaphorically to describe permanent disgrace. Livingston, et al. (2011) describe health-related stigma as a socio-cultural process in which social groups are devalued, rejected and excluded on the basis of a socially discredited health condition. Self-stigma is a subjective process “characterized by negative feelings about self, maladaptive behavior, identity transformation or stereotype endorsement” (p. 39). Social stigma describes the “phenomenon of large social groups endorsing stereotypes about and acting against a stigmatized group” (p. 39). Institutions that restrict the rights and opportunities for members of stigmatized groups are examples of structural stigma. Stigma is identified as a significant barrier for assessing health care and substance use treatment services (2011). Health care professionals may hold negative beliefs concerning persons with substance use disorders, including beliefs that they overuse system resources, are not vested in their own health, abuse the system through drug-seeking and diversion, and fail to adhere to recommended care (2011).

PICO Statement

The acronym PICO stands for: P=the specified patient or patient population, I=the issue or intervention being investigated, C=the comparison being made and O=the outcome that may be the result. The PICO statement for this capstone project is as follows:

P= Registered Nurse students and Registered Nurses (RN) in an RN residency program.
I= Education program for RN students and RN's in the residency program before attending the educational program on stigma and substance abuse.
C =RN students and RN's in the residency program before and after attending the educational program on stigma and substance abuse
O= Reduce the amount of stigma in this group of health care providers by providing an educational program on stigma and substance abuse disorders.

Problem Statement. Do Registered Nurse students and Registered Nurses in an RN residency program have less stigmatized viewpoints towards persons with substance abuse addictions after receiving an educational program on stigma and substance abuse addictions, in comparison to before receiving the educational program on stigma and substance abuse addictions?

Literature Review

Theoretical Foundation

Hildegarde Peplau's theoretic concepts are the foundation for this capstone project. Boyd (2008) writes Hildegarde Peplau's theoretic perspectives continue to be an important basis for the practice of psychiatric nursing, with the focus of the nurse-patient relationships. Peplau described the phases of therapeutic relationship in her Interpersonal Relations Theory (Peplau, 1952). Peplau also emphasized the importance of empathic linkage or "the ability to feel in oneself the feelings experienced by another person or people" (Boyd, p. 69). Merritt and Pocter

(2010) discuss Peplau's concepts of the therapeutic relationship as the central platform in mental health nursing practice. Peplau's theoretic approach to the patient's view of the therapeutic relationship is expressed in three "figural themes" as "relate to me, know me as a person and get to the solution" (Merritt & Proctor, p. 159). Jones, Fitzpatrick, and Drake (2012) discuss the absence of interpersonal curricula in programs of nursing and note that there has been a recent trend among health care organizations to offer educational modules to staff regarding relationship based care. The authors ask how it is that health care is in the situation where nurses are not comfortable dealing with interpersonal issues and aspects of relationship based care. "Now more than ever, we need the structure of an interpersonal paradigm, such as that proposed by Peplau, to guide curricula of professional nursing practice" (Jones, et al. p. 168). Negative attitudes towards persons with substance use disorders (SUD) affects everything from making an initial diagnosis of an SUD to the patients' likelihood of recovery (Meltzer et al., 2014). Mutual help groups may help alleviate stigma towards persons with substance abuse disorders.

Mutual Help Groups and Stigma

Lash, Curran, Timko, Mckay, and Burden (2011) discuss a substantial gap between practice and research in substance use disorder (SUD) continuing care. "The need to close the gap between research and clinical practice for the treatment of SUD's is great; particularly in the area of continuing care" (p.239). According to the authors Mutual Help Group continuing care (MHG's) or self-help support groups are one of the most widely available continuing care options and are usually integrated into professional treatment services (p.241). The authors noted MHG attendance following initial treatment was associated with positive substance use outcomes and improved treatment outcomes were linked to attendance over longer periods of time, group involvement, and participation in both outpatient mental health treatment, and

attendance at MHG (p. 241). Lloyd (2013) notes support groups and action groups can also help persons with SUD escape stigmatization at an individual level. Members can become representatives or speakers, providing a "living model of fully-normal achievement, being heroes of adjustment", proving an individual of this type can be a good person (Lloyd, 2013).

This capstone project included the systematic literature review conducted across five databases, which utilized search terms of addiction, substance abuse, self-help, mutual help, stigma and the combination of search terms (see table 1). Forty articles were selected to be included in the literature review (Appendix A). The articles selected were pertinent to this study because they provided background studies relating to the process of addiction and related to the process of self-help groups which are believed to reduce stigmatizing effects of addiction. Stigma is considered a primary barrier to treatment for persons with substance abuse disorders.

Table 1 Literature Search Items

Database	Search Terms	Results	Combined Search Terms	Results
CINAHI	**Addiction**	**5,344**	**Addiction and self help**	**47**
			Addiction and Stigma	**86**
Academic Search Premier	**Mutual help**	**4,771**	**Substance abuse and mutual help**	**391**
			Addiction and Stigma	**513**
psycARTICLES	**12-step**	**130**	**Addiction and 12-step**	**20**
			Addiction and Stigma	**5**
psysINFO	**Substance abuse**	**75, 437**	**Substance abuse and12-step**	**811**
			Addiction and Stigma	**474**
Medline	**Self-help**	**29, 998**	**Self-help and substance abuse**	**712**
			Addiction and	**141**

			Stigma	

Stigma Attached to Mental Illness

Pescosolido et al. (2010) addressed the stigma attached to mental illness as a "primary barrier" to treatment and recovery (p. 1321). The authors note stigma could be reduced if people became convinced that mental illnesses were "real" brain disorders and not "volitional behaviors" for which they could be blamed and punished (p.1321). For persons with mental health disorders this stigma produces discrimination in employment, housing, medical care, and social relationships. "On a societal level, stigma has been implicated in low service use, inadequate funding for mental health research and treatment (i.e. institutional stigma) and the "courtesy" stigma attached to families, providers, and mental health treatment systems and research" (p. 1322). The authors write public attitudes influence the way individuals in the community respond to the onset of mental health problems, the way clinicians respond to patients who come for treatment, and how public policy is crafted. "Public attitudes matter. They fuel the myth that mental illness is lifelong, hopeless, and deserving of revulsion" (p. 1324). Persons with addiction may also be criminalized.

Walker (2012) writes that addiction is the one disease you are criminalized for having and unlike patients with diabetes and other medical conditions who have prominent celebrity spokespeople, "people with active SUD's (substance abuse disorders) are as unseen as ever" (p. 3). Walker also discusses the criminalization of addiction as the one reason addicts stay in the shadows. "If you are not in recovery you can be prosecuted, you can lose your job, and you can lose your children" (p. 4). Mutual help groups are a continuing care intervention aimed at prevention of substance abuse relapses. According to Chism (2010), "Clinical prevention is defined as health promotion and risk reduction/illness prevention for individuals and families,

and population health is defined as including all community, environmental, cultural, and socioeconomic aspects of health" (p.19). Self-help groups or mutual-help groups are continuing care interventions for persons with substance abuse addictions.

Dadich (2010) discussed the role of self-help support groups for persons with alcoholism and drug addiction. Participants benefited with improved outcomes on substance use, enhanced sense of well-being, improved self-understanding, and greater hope. Self-help groups also played an important role in expanding friendship networks and strengthening support systems. Participants had a sense of belonging and connectedness and realized stronger connections to professional services. Kelly, Magill, and Stout (2009) conducted a systematic review of the research on mechanisms of behavior change in Alcoholics Anonymous (AA), concluding that social group dynamics in AA meetings, broader fellowship and expression of support was healing to members. Webb, Falko, Sniehotta, and Michie (2010) reviewed theories of behavior change regarding interventions for addictive behaviors. These authors discussed addiction as having two conditions; the strength of its reinforcement (reward seeking or withdrawal avoidance) and secondly, the failure to regulate, preventing the achievement of the person's or society's goals. (These behaviors are maladaptive). Vederhus, Timko, Kristensen, and Clausen (2011) investigated the relationship between patient perceptions of 12-step fellowships and the intent to participate. Findings indicated the majority of patients could potentially be motivated to attend with relatively simple strategies. Persons with substance abuse disorders have a unique stigma, apart from other mental health diseases.

Stigma in Substance Abuse Addictions

Janulis, Ferrari, and Fowler (2013) studied mechanisms of stigma toward individuals diagnosed with substance disorders. Substance disorders have a unique stigma and substance

disorders are viewed as a combination of crime and disease. The authors write negative consequences of substance abuse stigma include "disempowering addicted individuals" and limiting access to medical services (p. 1065). Other consequences include increasing the cost for addicted individuals to engage in optimally healthy behaviors. Substance abusers are less likely to utilize mental and physical health services and health service providers often hold stigmatizing and degrading attitudes toward dependent individuals. Palomar's (2012) study examined perceived rejection and secrecy in relation to illicit drug use and associated stigma that often includes stigma-related rejection from friends and family. Drug users who are convicted of drug-related offences may also experience structural stigma and may be denied employment, housing, and or school loans. Palomar writes drug users may seek to keep the drug use a secret and limit social interactions with non-users. Some users dissociate from friends and form new social circles consisting of other drug users where they will not be ridiculed. "Stigma also leads individuals to keep drug use a secret from health- care providers, and serves as a common barrier to drug treatment" (p. 573). Stigma is also a barrier in research studies because subjects often deny recent use. Low self-esteem, hopelessness and loss of confidence are associated with the secrecy of drug use. Lloyd (2013) reviewed research studies on the stigmatization of problem drug users, showing highly stigmatizing views among the general public, employers, health professionals, pharmacy staff, police officers, and problem drug users themselves. Reflection techniques and educational programs may enhance understanding of the experiences of persons with substance use disorders and thereby decrease stigma related to these disorders.

Prejudice, Stereotypes, and Discrimination

Earnshaw, Smith, and Copenhaver (2013) discuss stereotypes endorsed by health care providers and researchers as critical barriers to undertaking research involving persons with drug

addictions. Earnshaw et al., note the beliefs are that persons with addictions are non-compliant, are focused on getting high at the expense of using safe injection equipment, do not have strong communities, are out of control, and are unwilling to change their risk behaviors. Beliefs about drug users being "violent, having weak characters, being unhygienic, having contagious diseases, and being dangerous" were identified as the most strongly endorsed stereotypes among hospital nurses (p. 111). Discrimination may range from the subtle, for example gossip, to extremes of job loss and social ostracism. The authors note persons with addiction may experience discrimination from multiple sources including colleagues and family members. Stigma from family members may lessen their social support and stigma from work colleagues is associated with heightened stress and decreased well-being (2013). Researchers have evaluated interventions aimed at reducing stigma related to substance use disorders.

Rationale for Research Project

Livingston, Milne, Fang, and Amari (2011) conducted a systemic review of existing research that evaluated interventions designed to reduce stigma related to substance use disorders. Thirteen studies were included: of these three studies targeted the general public or social stigma, and seven of the 13 studies included medical students and other professional groups or structural stigma. Nine of the interventions used educational interventions and or direct contact with persons with substance abuse. The authors concluded contact based training and educational programs targeting medical students and professionals (police or counselors) are effective. Cadiz, Truxillo, and O'Neill (2012) noted a lack of education about substance use disorders contributes to the stigmatization of the disease and conducted a training program for nurse supervisors monitoring nurses in early recovery. This study concluded that training reduces stigma towards persons with substance use disorders, thus creating a more supportive

environment for nurses in recovery. Brener, Hippel, Kippax, and Preacher (2010) addressed physician and nurse negative attitudes towards injecting drug users, including perceptions that drug use is under the control of the individual, thus the individual was blamed for their drug use and any related illnesses. "In such cases, less pity, less concern, and less helping behavior towards members of the stigmatized population is elicited" (p. 1008). Health care professionals also reported worries regarding threats to personal safety, theft, and verbal abuse.

Stigma, social distance and discrimination are major obstacles to persons with addictions in obtaining mental health services. "Stigma shapes the way that individuals who are not drug users feel toward, think about, and treat people with a known or assumed history of drug addiction" (Earnshaw, Smith & Copenhaver, 2013, p. 111). Walker (2012) writes that "until addiction is elevated from the misconceptions and the mental images of the person who is an alcoholic and dying in the gutter, or dying in the crack house or heroin shooting gallery, there will always be shame" (p. 2). Training for health care professionals and public awareness will hopefully increase public awareness on addiction and decrease stigma attached to persons with addictions. Stigmatizing attitudes of health care professionals towards persons with substance use disorders may negatively affect health care delivery.

Consequences of Stigma

Van Boekel, Brouwers, van Weeghel and Garretsen (2013) conducted a systematic review of studies relating to stigma among health professionals towards persons with substance use disorders and the consequences for healthcare delivery. Stigmatizing attitudes lead to poor communication between professional and patient, diminished therapeutic alliance and "diagnostic overshadowing" or the misattribution of physical illness symptoms to substance use problems (2013). Nurses tended to make shorter visits, visit more often in pairs and have a more

task-oriented approach. "The provided care was suboptimal and had a more avoidant approach, which may result in diminished personal engagement, and empathy in the health care delivery" (p. 33). Monks, Topping and Newell's (2012) grounded theory study on how Registered Nurses in England cared for patients with complications of drug use revealed "lack of knowledge to care", and distrust and detachment" in the category of "dissonant care" (p. 935). Van Boekel et al. concluded negative attitudes of health care professionals caring for persons with substance use disorders may negatively affect health care delivery and result in treatment avoidance or interruption during relapse (2013). Negative attitudes of health professionals diminished patients' feelings of empowerment and subsequent treatment outcomes. Lack of education and training was cited as factors that may reduce negative attitudes of health care professionals.

Education and Training on Stigma

Monks, Topping and Newell (2012) concluded that better education and training coupled with role support about drug use may facilitate competent care for patients with substance use disorders. Nurses in this study reported distrust and detachment in interactions with patients who used illicit drugs, resulting in minimal interactions with the patients. The consequence of this mutual distrust resulted in an escalation of negative behaviors, ending in verbal or physical abuse (2012). "On other occasions it resulted in enforced or self-discharge of patients prior to resolution of their medical problems" (p. 942). The nurses cited lack of understanding of drug use as contributing to their reluctance to discuss issues relating to drug use while undertaking initial assessments. The authors concluded that the combination of lack of educational preparation and negative attitudes appeared to act as a barrier to effective care giving. Monks et al. (2012) recommendations include education and training for nurses to understand problem use

and addiction, manage withdrawals and related behavior, and initiate appropriate support for patients who use illicit drugs.

Recommendations for Future Study and Substance Abuse Addictions Advocacy

Recommendations for future studies include evaluations of substance use disorder interventions focused on persons with substance use disorders (self-sigma), the general public (social stigma), and medical students and other professional groups (structural stigma) (Livingston, Milne, Fang,& Amari, 2011). Recommendations also include research studies concerning the effectiveness of interventions aimed at first semester nursing students versus Registered Nurse Graduates. Effectiveness of mutual support groups in reducing self-stigma and stigma by family and friends of substance use disorder persons is another recommendation for future study. Does community support groups reduce social stigma by the general public in local communities? Walker (2012) writes public service announcements (PSA's) help encourage advocacy for other chronic diseases but PSA's for substance abuse are rarely seen. Walker also notes most other mental health advocacy groups receive funding from pharmaceutical organizations, unlike substance abuse addiction groups. Walker notes that stigma gets in the way of persons in recovery who return to the community and "blend right in" because the person is not in a situation to want to advocate for treatment because in most cases, the boss does not know he/she is in recovery. Unlike persons with other chronic diseases who have celebrity spokespeople and can talk to their employers about medical conditions, persons with active substance abuse addictions are "as unseen as ever" (p. 1).

Implications for Practice of Stigma

Meltzer et al. (2013) discuss the implications of negative labeling or negative attitudes towards patients with substance use disorders (SUD's) and the negative impact on patients with

substance use disorders. "Poor attitude, or even low professional satisfaction in caring for individuals with SUD's affects everything from making an initial diagnosis of a SUD to a patient's likelihood of recovery" (p. 357). The authors note evidence suggests stigma impedes patients recovery by negatively affecting self-esteem, self-efficacy and longitudinal disease management. Cadiz, Truxillo, and O'Neill (2012) concluded that the lack of education about substance use disorders contributes to the stigmatization of the disease and that substance abuse stigma may cause impaired nurses not to seek help or treatment, thus impacting performance and risking patient safety. Bartlett, et al. (2013) write that negative attitudes of health care providers have a negative impact on the care patients with SUD's receive including reluctance to remain in the hospital for the required treatment period. These patients' self-esteem and treatment outcomes are negatively affected if patients do not receive medications that could help them through the withdrawal process.

Project Plan and Evaluation

Market/Risk Analysis and SWOT Analysis

Table 2 below depicts the strengths, weaknesses, opportunities and threats (SWOT) analysis for this capstone project concerning stigma and health care professionals. Strengths of this project included the enthusiasm of the hospital nursing administration and Registered Nurse (RN) educator. Minimal budget costs were involved and this project was based on educational interventions to reduce stigma towards persons with addictions. Weaknesses of this project~~s~~ were the limited time to complete the project and scheduling issues pertaining to scheduling the presentations for students. Hospital administration asked to utilize this completed project in application for Magnet approval. The RN nurse educator at the hospital has also asked to have

the presentation of the PowerPoint presented to other cohort's in the RN nurse residency program.

Table 2 SWOT Analysis

Strengths
Hospital based, Community College, and Regis University based project Enthusiasm of Hospital nursing administration and RN Nurse Educator. Minimal budget costs involved. Evidenced- based project

Weaknesses	**Strategies to overcome weaknesses**
Limited time to complete project Scheduling Issues with the hospital and community college.	Submit to Regis IRB and obtain approval. Spend extra time explaining purpose of project to the hospital staff and community college staff.

Opportunities
The hospital has asked to utilize project for Magnet application. Publication in Scholarly Nursing Journal. Replication of project as evidence based project. PowerPoint presentation scheduled for future RN residency students.

Threats	**Strategies to overcome threats**
Lack of approval by Regis IRB	Submit changes to Regis IRB with approval of Capstone Chair

Stakeholders and Project Team

Stakeholders included the faculty capstone chair and Regis faculty, the regional medical center staff, community college students and faculty, the Regis DNP student mentor and the

Regis student. The project team includes the Regis DNP student mentor, Regis faculty mentors and capstone chair, community college students, nurses participating in the RN nurse residency program and the Regis DNP student.

Vision and Mission

The vision of the this Capstone Project is to empower persons with substance abuse to be less stigmatized, thus facilitate them to remain sober and free from substance abuse and facilitate a successful reentry into the community. This vision is to increase understanding of the stigma attached to substance abuse addictions thus enabling health care professionals to better support patients with this diagnosis. The mission of this capstone project is to present an educational program on substance abuse addictions and stigma for health care professionals, thus increasing awareness and understanding among health care professionals. This capstone project had both short term and long term objectives.

Project Objectives

Short term objectives are to increase knowledge, understanding, and awareness of substance abuse addictions, thus decreasing stigmatizing views of the health care professionals receiving the educational presentation. Long term objectives include deceased and or elimination of substance abuse or use and decreased readmission rates and relapse rates, facilitated by increased utilization of health care services by persons with substance abuse addictions. Patients who are less stigmatized may have long term benefits including achievement of members' long term goals (obtaining and sustaining employment), and development of recovery support networks. Formation of therapeutic relationships, development of effective social skills, and benefits from helping others contribute to members' enhanced self-esteem and integration into the community. The logic model is the evaluation plan utilized for this capstone project.

Evaluation Plan

Logic Model-Description and Rationale

Zaccagnini and White (2011) suggest: "Thinking about a program in logic model terms prompts the clarity and specificity required for success, often demanded by funders and your community" (p.480). The authors note logic models all have similar components of inputs, outputs, and outcomes. In the logic model "inputs" are "resources required to implement and evaluate the project" and "outputs" are the "immediate results of the project". "Outcomes" may be listed at three levels: short-term, long-term, and impact. Zaccagnini and White note that long term outcomes reflect a change in behavior in contrast to impact outcomes that apply to results of a change in the population affected by the project. Impact goals of this project include reduced rates of relapse in this population of substance abuse users and increased quality of life and a successful transition and integration of this population back into our community**.** (See appendix B Logic Model**).** Other impact goals are community education and acceptance of this population of substance abuse disorders. The statistical program SPSS is utilized as the statistical analysis software package for this project.

Methodology and Measurement

Description of population and methodology. The sample size for this project included 11 Registered Nurses (RN's) in the RN Nurse Residency Program at Regional Medical Center and 34 RN students attending a local community college for a total of 45 participants. Data was collected between November 14, 2013 and January 09, 2014 at two separate training events. Participants completed pre-tests just before training and post-tests just after training (appendix C). The PowerPoint on Substance Abuse and Stigma was presented and time for discussion and questions followed the PowerPoint presentation. The training was conducted by the author who

was also responsible for distributing and collecting the surveys, which were kept confidential. This educational PowerPoint included information on the process of substance use addiction, definitions of stigma, types of stigma (public, self, and courtesy), and social and economic consequences of stigma and attitudes of health care professionals towards persons with substance abuse addictions. Participants were instructed not to add any names or other identification information to the surveys. The pre-test-post-test methodology focused on assessing changes in knowledge and attitudinal outcomes relating to learning and training transfer. Substance abuse stigma was assessed on the basis of the 10 item pre-test and post-test, and participants responded to these items using a 5-point Likert scale. Stigma was measured at both time one and time two (pretests and posttests). A random number was assigned to the pretests and posttests to link the pretests and posttests together. Protection of the participants' data included storage of the tests in locked cabinets and the data was compiled and analyzed on a password protected computer.

***T*-test.** The data analysis plan includes the *t* test for dependent groups, sometimes called the paired *t* test or a correlated group's *t* test (Polit, 2010). The commands for the dependent groups' test are under the *Analyze* menu and are: *Compare Means, Paired Samples T Test* (p.120). The independent variable is pre- exposure and post- exposure to the educational program on substance abuse addictions and stigma. The dependent variables are responses to the pre-test questions and responses to the post-test questions. The Statistical Package for the Social Sciences (SPSS) statistical software package was used for analysis of data. The sample size is actually the entire population of Registered Nurse Students and population of RN's in the Nurse Residency Program, in attendance at the educational program who have completed the pre-tests and post-tests. The null hypothesis was that the means of the two groups were not significantly different.

The alternative hypothesis was that the means of the two groups were significantly different. Data was entered directly into the SPSS.

Threats to Validity and Reliability. Table 3 depicts potential threats to validity and reliability. The researcher is an employee at the hospital and a former employee at the community college and participants in this study may be familiar with the researcher. The small population of participants may not represent each group. The nursing student participants were all first semester nursing students in one cohort attending the local community college.

Table 3 Threats to Validity and Reliability

Threats to Reliability (Internal)	Threats to Reliability (External)	Threats to Validity (Internal)	Threats to Validity (External)
Researcher's interpretations and selection of data may influence results.	Position of researcher as employee at hospital site and former employee at community college may influence results.	Small population and selection of population may not represent each group.	Is it possible to replicate selection procedures?

The principal investigator (DNP) student had extensive experience as a psychiatric Registered Nurse and has completed the CITI Collaborative Institutional Training Initiative (CITI) **(**Appendix D). Approval for this capstone project was obtained from Regis University (Appendix E) as an exempt study, the local regional medical center (Appendix F) and the local community college (Appendix G).

Timeframe. This capstone project involved a time frame of approximately three years from conception of the project, literature review, and project completion as depicted in table 4 below. The PICO statement was developed and finalized during the first year of the Doctorate of Nursing Program and the project model plan developed during last semester utilizing the Logic Model. The extensive literature review was conducted during 2013 and additional journal articles added during 2014. The final project was completed during 2014. Table 4 below depicts the Doctor of Nursing Practice Courses completed that directly impacted the planning and implementation of this project.

Table 4 Time Frame

Problem Recognition and Needs Assessment	**Goals, Objectives and Mission Statement**	**Theoretical Underpinnings**	**Work Planning and Planning for Evaluation**	**Implementation and Giving Meaning to the Data. Utilizing and Reporting Results**
Clinical Experiences during Application to Practice A.	**Theoretical Application for the DNP. Clinical Research & Application to Practice B**	**Theoretical Application and Clinical Research**	**Strategic Planning**	**DNP Capstone Projects A, B, C and D.**

Year one	Years one and two	Years one and two	Year two and three	Years one, two and three

Budget and Resources. Table 5 below lists budget requirements and resources for this capstone project. Resources provided by both the community college and the local regional hospital included computer utilization, paper products for copying, copy ink supplies and classrooms for the PowerPoint presentations. Each of these facilities also graciously provided access to RN students and RN's in the nurse residency program. Table 5 below also shows estimated costs to replicate this project.

Table 5 Budget and Resources

Resources	Estimated Costs to Replicate
Computer uses, paper, ink	Estimated $500 total.
Clinical Nurse Educator Mentor	$50 Hour for 150 Hours (7,500 $ total).
DNP Student Hours (160 hours at RN estimated wage of $30 hour)	4,800$
Classrooms for Educational Presentations	No actual costs (Estimated $500.00).

Project Findings and Results

Data of the answers given by participants in this study was analyzed in the Statistical Package of the Social Sciences (SPSS) software and data tables generated. The dependent group's *t* test was chosen to analyze answers chosen by participants before and after attending the educational program and power point. Appendix H is the SPSS computer printout for the dependent group's *t* test showing the 10 paired questions pre-test and post-test (appendix C). At the < 0 .05 level for a 2-tailed test only pairs seven, eight, and nine were statistically significant.

Question seven was concerning if most employers would hire someone who has been treated for substance abuse addiction if he/she was qualified for this position Sig (.005). Question 8 asked about being willing to have someone as a close friend who has been treated for substance abuse Sig. (.003). Question 9 stated persons with substance abuse are generally not responsible citizens Sig. (.041). Appendix I shows the paired samples correlations SPSS printout. Frequency statistics were calculated (see Tables 6, 7, 8, 9, 10, and 11**).** Tables 12-13 below depict frequency statistics from question 1 stating that persons with substance abuse disorders abuse the medical health system and tables 14 and 15 concerning if persons with substance abuse disorders have personal control over his/her addiction behaviors. Tables 16-17 show frequency statistics on the question about if substance abusers are weak-willed and lack self- control. Differences in pretest and posttest answers to these and the other remaining questions were not statistically significant, showing statistically significant changes in attitudes did not occur as a result of the one hour educational presentation. It is likely that attitudes towards persons with addictions are not easily modified, especially with simply a one hour educational presentation. Another aspect is that participants were not experienced psychiatric nurses, with exposure to persons with substance abuse addictions. Therefore reflection techniques and or lived experiences of health care professionals interacting with persons with addictions were not reflected in the results of this limited study.

Table 6 Pre Test Employers hiring persons with addictions. Question 7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	8.9	8.9	8.9
	Disagree	20	44.4	44.4	53.3
	Neutral	11	24.4	24.4	77.8
	Agree	10	22.2	22.2	100.0
	Total	45	100.0	100.0	

Table 7 Post Test Employers hiring persons with addictions Question 7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	8.9	8.9	8.9
	Disagree	28	62.2	62.2	71.1
	Neutral	8	17.8	17.8	88.9
	Agree	5	11.1	11.1	100.0
	Total	45	100.0	100.0	

Table 8 Pre Test Close friend of person with addictions Question 8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	6.7	6.7	6.7
	Neutral	6	13.3	13.3	20.0
	Agree	24	53.3	53.3	73.3
	Strongly Agree	12	26.7	26.7	100.0
	Total	45	100.0	100.0	

Table 9 Post- Test Close friend of person with addiction Question 8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	4	8.9	8.9	8.9

	Neutral	10	22.2	22.2	31.1
	Agree	27	60.0	60.0	91.1
	Strongly Agree	4	8.9	8.9	100.0
	Total	45	100.0	100.0	

Table 10 Pre- Test Generally not responsible citizens Question 9

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	13.3	13.3	13.3
	Disagree	21	46.7	46.7	60.0
	Neutral	10	22.2	22.2	82.2
	Agree	8	17.8	17.8	100.0
	Total	45	100.0	100.0	

Table 11 Post- Test Generally not responsible citizens Question 9

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.2	2.2	2.2
	Disagree	19	42.2	42.2	44.4
	Neutral	16	35.6	35.6	80.0
	Agree	9	20.0	20.0	100.0
	Total	45	100.0	100.0	

Limitations

The limitations of this study include the sample size (n=45) and the fact this is a mixed sample of both nursing students attending the local community college and Registered Nurses (RN's) who are already on staff at the local regional medical center participating in the yearlong RN Residency Program. These two groups were not analyzed separately but were analyzed as one group. The presentations were presented on two different dates in two different locations for

the two groups. Other limitations were the inexperience of the Doctor of Nursing Practice (DNP) student, who conducted this study.

Instrument Validity and Reliability

The pre-test/post-test does not have established validity and reliability as an instrument evaluating stigmatizing attitudes. This pretest/posttest was an original survey of ten questions, based on the researchers' literature review of studies utilizing measurement of stigma instruments. Questions were adapted and based on aspects of stigma gleaned from the literature. These questions were reviewed with experts in the facility for agreement regarding validity.

Table 12 Pre-Test Abuse the Medical Health System

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.2	2.2	2.2
	Disagree	12	26.7	26.7	28.9
	Neutral	11	24.4	24.4	53.3
	Agree	14	31.1	31.1	84.4
	Strongly Agree	7	15.6	15.6	100.0
	Total	45	100.0	100.0	

Table 13 Post- Test Abuse the Medical Health System

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	6.7	6.7	6.7
	Disagree	12	26.7	26.7	33.3
	Neutral	13	28.9	28.9	62.2
	Agree	13	28.9	28.9	91.1
	Strongly Agree	4	8.9	8.9	100.0
	Total	45	100.0	100.0	

Table 14 Pre Test Personal Control of Addiction Behaviors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	13.3	13.3	13.3
	Disagree	19	42.2	42.2	55.6
	Neutral	11	24.4	24.4	80.0
	Agree	7	15.6	15.6	95.6
	Strongly Agree	2	4.4	4.4	100.0
	Total	45	100.0	100.0	

Table 15 Post -Test Personal Control of Addiction Behaviors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	4.4	4.4	4.4
	Disagree	22	48.9	48.9	53.3
	Neutral	17	37.8	37.8	91.1
	Agree	4	8.9	8.9	100.0
	Total	45	100.0	100.0	

Table 16 Pre- Test Weak-willed and lack self-control

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	6.7	6.7	6.7
	Disagree	20	44.4	44.4	51.1
	Neutral	14	31.1	31.1	82.2
	Agree	7	15.6	15.6	97.8
	Strongly Agree	1	2.2	2.2	100.0
	Total	45	100.0	100.0	

Table 17 Post Test Weak- willed and lack self-control

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	4.4	4.4	4.4

	Disagree	22	48.9	48.9	53.3
	Neutral	14	31.1	31.1	84.4
	Agree	5	11.1	11.1	95.6
	Strongly Agree	2	4.4	4.4	100.0
	Total	45	100.0	100.0	

Table 18 Pre- Test Blame and personal responsibility

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	2.2	2.2	2.2
	Disagree	13	28.9	28.9	31.1
	Neutral	10	22.2	22.2	53.3
	Agree	16	35.6	35.6	88.9
	Strongly Agree	5	11.1	11.1	100.0
	Total	45	100.0	100.0	

Table 19 Post- Test Blame and personal responsibility

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	4.4	4.4	4.4
	Disagree	11	24.4	24.4	28.9
	Neutral	18	40.0	40.0	68.9
	Agree	12	26.7	26.7	95.6
	Strongly Agree	2	4.4	4.4	100.0
	Total	45	100.0	100.0	

Implications for Practice and Conclusions

This capstone study emphasized the need for additional research studies concerning attitudes of health care professionals towards persons with substance use disorders. Educational facilities and nursing programs may need to incorporate additional training into the current curriculum to ensure future health care professionals meet unmet needs of persons with

substance abuse disorders. Persons with substance use disorders need non-judgmental care from health care professionals in order to help them have the best chances for ultimate successful rehabilitation and avoidance of relapse. This study revealed that practicing RN's and RN students did benefit somewhat from a limited one hour educational program on stigma towards persons with substance abuse disorders. Additional and more extensive research should be conducted to evaluate the effectiveness of interventions in reducing stigma of health care professionals towards persons with substance abuse disorders.

> The involvement of service users (people who use illicit drugs) in any educational initiatives may help to expose nurses, to see the person behind the drugs and ultimately enable RN's to manage and deliver more competent and empathic care to this patient group (Monks, Topping & Newell, 2012, p. 945).

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Appendices

Appendix A Systematic Review of the Literature

Author/Year Article Title and Journal	Database and Keywords Funding Source	Research Design and Level of Evidence	Study Aim/Purpose	Population Studied/Sample Size/Criteria/ Power	Methods/Study Appraisal/ Synthesis Methods	Primary Outcome Measures and Results	Author Conclusions/ Implications of Key Findings
#1. Ferris, M., Amato, L., & Davoli, M. (2009). Alcoholics' Anonymous and Other 12-step programmes for alcohol dependence (Review). *Cochrane Library, 3*, 1-26.	Cochrane Library. Internal Support: Dipartimento di Epidemiologia ASL RME, Italy. External Source of Support: None. Keywords: Program Evaluation; Self-Help Groups; Alcoholics Anonymous; Alcoholism [rehabilitation]; Randomized Controlled Trials as Topic.		Purpose is to assess the effectiveness of Alcoholics Anonymous (AA) or Twelve-Step Facilitation (TSF) in reducing alcohol intake, Achieving abstinence, improving the quality of life of affected people and reducing alcohol associated accidents and health problems.	Types of studies considered are randomized trials comparing AA or other TSF programmes to other psychological treatments or no treatment. Where available observational studies with control groups are considered and separately analyzed.	Severity of addiction does not seem to be differentially influenced by the interventions from studies included in this review. No conclusive results have been obtained about the superiority of one treatment over the other.	The authors note further research should be devoted to quality of life outcomes for patients and their families. "A well designed qualitative study could identify hypotheses for further research" (p. 8). One major limitation is that there were many interventions compared in the same study and too many hypotheses were tested at the same time to identify factors which determine treatment success.	"Further large-scale studies comparing just one AA or TSF intervention with a control should be undertaken to test the efficacy of that intervention over longer follow-up periods" (p. 8).

#2. Kelly, J.F., Stout, R., Zywiak, W., & Schneider, R., (2006). A 3-year study of addiction mutual-help group participation following intensive outpatient treatment. *Alcoholism: Clinical and Experimental Research, 8,* (30), 1381-1392.	CINAHL Database. Key Words Mutual-help groups, Self-help, Alcoholics Anonymous, Narcotics Anonymous, SMART Recovery, Women for Sobriety. No funding source listed.	Alcohol-dependent outpatients enrolled in a Randomized-controlled telephone case monitoring trial were assessed at treatment intake and at 1, 2, and 3 years post discharge. Robust regression curve analysis was used to examine dose-response relationships between mutual-help and outcomes. Level of Evidence Level Two (Seven Tiered Levels of Evidence according to Houser & Oman, 2011). (Randomized-controlled telephone case monitoring trial).	The purpose of this study is to review which mutual help groups patients attend, what level of participation may be beneficial and which patients are likely to attend.	Population is alcohol dependent outpatients. Sample size: N=227, 27% female, M age = 42. Criteria for inclusion: 1. be HMO members for at least 8 months, have telephone service and a stable address, be between ages 18 and 65 of age, literate in English, not have definite plans to leave the region for at least 2 years, have alcohol as their main drug of choice, (patients who met criteria for alcohol abuse could not be dependent on other substances, not have active psychosis or dementia that does not reverse with abstinence and not have a major health problem other than a SUD, likely to require hospitalization. within the next 6 months.	Lagged-panel hierarchical linear models tested whether mutual help participation in the first and second year following treatment predicted subsequent outcomes and whether these effects were moderated by gender, concurrent axis 1 diagnosis, religious preference, and prior mutual-help experience.	Outcome measures: SUD (Substance Use Disorder) was assessed at study intake by the Structured Clinical Interview for DSM-IV Disorders (SCID). The Addiction Severity Index (ASI) and the Time Line Follow Back Interview. (TLFB) and Drinker Inventory of Consequences was another outcomes measure used in this study. Results included the finding that greater mutual-help participation predicted less intense drinking.	"Results also indicated that greater mutual-help participation was associated with both enhanced rates of abstinence and less intensive alcohol consumption on days when drinking did occur" (p. 1387). Robust regression surface analysis suggests that even modest levels of participation may increase abstinence; yet higher levels of participation may be needed to reduce the intensity of relapse.	

# 3 Magura, S., Rosenblum, A., Villano, C.L., Vogel, H.S., Fong, C., & Belzler, T. (2008). Dual-Focus Mutual Aid for Co-Occurring Disorders: A Quasi-Experimental Outcome Evaluation Study. *The American Journal of Drug and Alcohol Abuse, 34.* 61-74. doi: 10.1080/00952990701764623. PsycINFO database.	PsycINFO database. Keywords: Co-occurring disorders, mental illness, mutual aid, program evaluation, self-help, substance abuse, treatment outcomes, 12-step groups. Funding National Institute on Drug Abuse, Grant.	Quasi-experimental Outcome Evaluation Study. Level Three from the Seven Tiered Levels of Evidence.	Study purpose: Evaluation of Double Trouble in Recovery (DTR) for assisting individuals to recover from co-occurring substance use and psychiatric disorders. "Controlled designs are rare in studies of mutual aid" (p. 61).	Population is individuals with co-occurring substance use and psychiatric disorders. Sample size 229 who met criteria out of 481 patients who were enrolling in the CDTP (psychiatric continuing day treatment program). CDTP patients were excluded from the study if younger than age 18, did not understand or speak English, appeared intoxicated on drugs or alcohol, carried a diagnosis of mental retardation, were deemed actively psychotic, or were unable to give informed consent.	Intent to treat analysis on pre-DTR and post-DTR cohorts. The first cohort did not have DTR (Double Trouble in Recovery) available while the second cohort was exposed to DTR after it was established in the program. Both cohorts were assessed at program admission at a six month follow-up.	Outcome Measures: Structured interview that obtained data on demographics, employment/support status, living arrangements, psychiatric diagnoses, medication adherence, recent substance use and addiction history. Program retention data was obtained from program records.	This stud reinforce conclusi mutual a groups c complem rather tha compete professio mental h and addi treatmen degree o participa the mutu groups w disappoi

# 4. Zemore, S.E., Kaskutas, L.A., & Ammon, L.N. (2004). In 12-step groups, helping helps the helper. *Society for the Study of Addiction, 99,* 1015-1023.	CINAHL Database. Key words: 12-step groups, Alcoholics Anonymous, helping, treatment outcome. Funding by a grant from the National Institute on Alcohol Abuse and Alcoholism.	Longitudinal Treatment Outcome. Randomized Trial. Evidence Level Two.	Study Aim to examine whether clients in treatment for alcohol and drug problems benefit from helping others and how helping relates to 12-step involvement.	Community sample of (n=279) of alcohol and or drug-dependent individuals. Criteria age 18 or over, diagnosed with alcohol and or drug dependence, report no psychosis, have stable housing, have 72 hours or more of clean and sober time and provide consent to participate in a randomized trial. Another requirement is that participants have had no treatment beyond detoxification in the previous 30 days.	Participants completed study measures during three interviews. Study sites were three mixed gender programs and one women-only program. Core analyses involved path analysis using weighted least-squares estimation for categorical variables.	Outcome measures include an eight item scale assessing 12-step involvement. Seven questions assessed helping during treatment. Substance use outcome measures, measured at the 6 month follow-up included 1. 30 day abstinence from both alcohol and drugs and 2. Binge drinking. Results (model one) revealed a strong, positive association between 12-step involvement preceding follow up and probability of abstinence at follow-up-yet helping during treatment exerted null effects. "Still, helping was related to treatment outcomes indirectly, by way of influencing 12-step involvement"	"These null results for 12-step involvement contradict some research showing that binge drinking decreases with involvement" (p. 1021). "Findings support the helper therapy principle and clarify the process of 12-step affiliation" (p. 1015).

						(p. 1021). Model 2 showed a significant negative association between helping during treatment and probability of binge drinking at follow-up.	

#5. Lucoma, J.B., Hayes, S.C., Fletcher, L., & Kohlenberg, B.S. (2012). Slow and steady wins the race: A randomized clinical trial of acceptance and commitment therapy targeting shame in substance abuse disorders. *Journal of Consulting and Clinical Psychology, 80,* (1). 43-53.	PsycINFO database. Key words: Shame, substance use disorder, stigma, mindfulness, acceptance and commitment therapy. Funding source: National Institute on Drug Abuse Grant.	Consecutive pairs of cohorts were assigned in a pair wise random fashion to receive either Treatment as Usual (TAU) or the ACT intervention. The ACT intervention consisted of three 2 hour group sessions scheduled during a single week. Level Two evidence.	This study examined a group-intervention for shame based on principles of acceptance and commitment therapy (ACT).	Participants were 133 adults (61 female, 72 male) diagnosed with a substance use disorder participating in a 28-day residential program. Criteria: all participants qualified for a diagnosis of substance abuse or dependence.	Method: Consecutive cohort pairs were assigned in a pair wise random fashion. Substance abuse outcomes were analyzed using generalized linear mixed models. "Combined drug or alcohol treatment utilization at follow-up was the main focus of this analysis" (p. 48).	Outcome measures are substance abuse outcomes. For each of the 13 weeks participants were scored as either drug and alcohol free or having used substances. Measures included the Mental Health (GHQ), Quality of Life (QLS), Shame (ISS), Social Support (MSPSS) and Treatment Use (TSR). "Results indicated that reductions in shame during active treatment predicted higher levels of substance use at follow up" (p. 51). "Meditational Analyses suggested that the more gradual reductions in shame found in the ACT group protected against the pattern seen in TAU for shame reductions to be associated with subsequent	"Results of this study suggest that acceptance and mindfulness-based interventions may help people to step out of a cycle of avoidance and shame and move toward a path of successful recovery that leads to more stable reductions in shame and to more functional ways of living" (p. 51).

						higher levels of substance use". The ACT intervention led to higher levels of outpatient treatment attendance during follow-up.	

# 6. Meade, C.S., Drabkin, A.S., Hansen, N.B., Wilson, P.A., Kochman, A., & Sikkema, K.J. (2010). Reductions in alcohol and cocaine use following a group coping intervention for HIV-positive adults with childhood sexual abuse histories. Addiction, 105. 1942-1951.	psycINFO database. Key Words Coping, HIV/AIDS randomized controlled trial, sexual abuse, substance abuse. This research was supported by grants from the National Institutes of Health.	Research design is randomized controlled trial. Participants were assigned randomly to the experimental coping group or a time-matched comparison support group. Both interventions were delivered in a group format over 15 weekly 90-minute sessions. Level of evidence: Level II	Study Aim: This study tested the effects of a coping group intervention for HIV-positive adults with childhood sexual abuse histories on alcohol, cocaine and marijuana use.	Population: A diverse sample of 247 HIV-positive men and women with childhood sexual abuse. Inclusion criteria were at least 18 years of age, HIV-positive serostatus and sexual abuse as a child or adolescent.	Methods: After completing the baseline assessment, participants were assigned randomly to either the experimental coping condition (LIFT) or a time-matched comparison support condition. Longitudinal changes in substance use were examined over the 16-month period from baseline to 12 month follow-up. (Five assessment points at 4-month intervals).	Primary outcomes are cocaine, marijuana, and alcohol use. The results suggest that LIFT (a theory based group coping intervention is effective in promoting sustained reductions in risky drinking and cocaine use.	"By teaching patients how to identify and implement effective coping strategies to manage stressors related to living with HIV and CSA (childhood sexual abuse) LIFT had beneficial effects on multiple outcomes, notably traumatic stress, sexual risk and substance abuse" (p. 1948). This approach could be incorporated into community-based mental health services to improve clinical outcomes and quality of life among HIV patients.

#7. Timko, C., DeBenedetti, A., & Billow, R. (2006). Intensive referral to a 12-step self-help groups and 6-month substance use disorder outcomes. *Addiction, 101*. 678-688.	Academic Database. Key words: Randomized controlled trial, substance use disorder, 12-step self-help. Support from the Department of Veterans Affairs Office of Research and Development (Health Services Research and Development Service).	Randomized Controlled Trial. Level II of Houser and Oman Seven Tiered levels of Evidence (p. 141).	Study aim: "This study implemented and evaluated procedures to help clinicians make effective referrals to 12-step self-help groups" (p. 678).	Sample was total of 382 patients entering SUD out-patient treatment at a Department of Veterans Affairs (VA) program. The participants were judged eligible for the study if clinically judged by clinical staff to be cognitively able to understand the study's questionnaire and interview procedures.	Individuals with substance use disorder entering a new treatment episode were assigned randomly to a standard referral or an intensive referral to self-help condition. 12 counselors were assigned randomly to deliver either the standard or intensive referral condition. Patients were followed at 6 months after their intake to out-patient.	Outcome measures: The Addiction Severity Index (ASI) was used to collect information on patient's substance use. To measure the 12-step Self-help group attendance the AA Affiliation Scale (AAAS) was used. "Among patients with relatively less previous 12-step meeting attendance, intensive referral was associated with more meeting attendance during follow-up than was standard referral" (p. 678).	"The brief intensive referral intervention was associated with improved 12-step group involvement and substance use outcomes even among patients with considerable previous 12-step group exposure and formal treatment. Future 12-step intensive referral procedures should focus on encouraging 12-step group involvement in addition to attendance to benefit patients most effectively" (p. 678).

#8. McHugh, R.K. & Greenfield, S.F. (2010). Psychiatric symptom improvement in women following group substance abuse treatment: Results from the women's recovery group study. *Journal of Cognitive Psychotherapy, An International Quarterly, 24*, (1). 26-36. doi: 10.1891/0889-8391.24.1.26	Academic Search Premier. Key words: substance dependence, relapse prevention, co-occurring disorders, gender, depression, anxiety. This study was supported in part by grants from the National Institute on Drug Abuse.	Randomized clinical trial. This women's recovery group study was a trial comparing a new manual-based group treatment for women with substance abuse disorder with Group drug counseling. Level II from the Seven tiered levels of evidence.	The study aim was to examine the course of psychiatric symptoms among women receiving substance abuse group therapy as part of a stage I clinical trial.	Thirty six women who met the criteria for a diagnosis of current substance dependence (DSM-IV) were enrolled in a Stage I group therapy treatment development trial. Participants were recruited from substance abuse treatment facilities and community advertisements.	Data from the 36 women enrolled were examined to determine whether symptoms of depression and anxiety would improve with treatment and whether these improvements would demonstrate durability over the follow up period. Differences between the WRG (Women's Recovery Group) and the GDC (Group Counseling Group) were examined using independent samples t-tests and X2 tests. "Both between and within subject subjects changes in symptoms over time were examined using repeated measures of analysis of variance (ANOVA).	Primary outcome measures included two self-report measures the Beck Anxiety Inventory (BAI) and the BDI) and the Addiction Severity Index. Although there were no group differences in psychiatric symptom improvement, analyses demonstrated significant within subject improvement in depression, anxiety, and general psychiatric symptoms.	"This study demonstrated significant psychiatric symptom reduction that remained durable through 6 months of follow up for women receiving group therapy focused on substance abuse relapse prevention" (p. 26).	

#9. Petry, N.M., Weinstock, J., & Alessi, S.M. (2011). A randomized trial of contingency management delivered in the context of group counseling. *Journal of Consulting and Clinical Counseling, 79,* (5). 686-696. doi: 10.1037/a0024813	Academic Journals Database. Key words: contingency management, substance abuse, treatment, group therapy. Researchers are from the University of Connecticut School of Medicine. The research and preparation of this report were funded by National Institutes of Health Grants and by a General Clinical Research Center Grant.	The research design is a randomized trial. Level II level of evidence. Substance abusing patients initiating outpatient treatment at 2 community based clinics were randomized to standard care with frequent urine sample monitoring for 12 weeks (SC) or that same treatment with contingency management (CM) delivered in the context of group counseling sessions.	The objective of this study evaluated whether adding CM to group-based outpatient treatment would increase attendance and drug abstinence relative to standard care. "Typically reinforces are provided on an individual basis to patients for submitting drug-negative samples" (p. 686). Most treatment is provided in a group context and poor attendance is a substantial concern.	Participants were 239 outpatients initiating treatment at one of two community-based clinics located in urban areas in Southern Connecticut. "The sample size of about 120 patients per condition was estimated from meta-analyses of CM interventions on attendance" (p. 687). Criteria: if began intensive outpatient treatment at one of the clinics within 72 hours, met DSM diagnosis of cocaine, opioid or alcohol abuse or dependence, age 18 or older, and English speaking.	In the CM condition patients earned opportunities to put their names in a hat based on attendance and submission of drug-negative samples. Data analyses methods: T-tests and chi-square tests compared baseline characteristics between treatment conditions. Survival analysis evaluated differences between treatment conditions in terms of days until discharge from the clinic. "Logistic regression identified predictors of a negative toxicology screen at the most distal 12-month follow up evaluation" (p. 689).	"Primary outcomes were total number of group counseling sessions attended and longest durations of attendance and abstinence achieved" (p. 689). Additional measures included the Addiction Severity Index and the HIV Risk Behavior Scale (HRBS).	Conclusions: "These data demonstrate that CM delivered in the context of outpatient group counseling can increase attendance and improve drug abstinence" (p. 686). The researchers note this study is one of the first randomized studies to evaluate CM when delivered entirely in the context of group counseling sessions. "As such it represents an important step toward bringing CM into the hands of providers, who rarely provide individual treatment to patients in community settings" (p. 694).

#10. Witkeiwitz, K., Bowen, S. (2010). Depression, craving and substance use following a randomized trial of mindfulness-based relapse prevention. *Journal of Consulting and Clinical Psychology, 78,* (3). 362-374.	Database: psycARTICLES. Key words: mindfulness based relapse prevention, substance use, craving, negative affect, depression. Research was supported by a National Institute on Drug Abuse Grant.	Research design randomized trial. Individuals with substance use disorders were recruited after intensive stabilization and then randomly assigned to either 8 weekly sessions of MBRP or a treatment as usual control group.	The goal in this study was to examine the relation between measures of depressive symptoms, craving and substance use following MBRP (mindfulness-based relapse prevention).	The sample was 168 participants recruited from a private, nonprofit service agency that provided both inpatient and outpatient care for alcohol and other drug use disorders. All participants were fluent in English and had completed intensive outpatient or inpatient treatment within the previous 2 weeks. "Excluded from the study were those with current psychosis, dementia, imminent suicide risk, or significant risk for withdrawal, those unable to attend treatment due to high risk of relapse or continued heavy use, as determined by agency staff.	"Approximately 73% of the sample was retained at the final 4 month follow up assessment" (p. 362). "To test the first hypothesis that there is a strong, positive relation among depressive symptoms, craving and substance use, we examined the associations between depression scores, craving scores, and substance use outcomes for both intervention conditions using path analyses" (p. 365).	All measures were self-reports administered via a web-based assessment program. The Timeline Follow-Back was used to assess alcohol or other drug use. The Penn Alcohol Craving Scale (PACS) was adapted to include craving for alcohol and for other drugs. Depression was assessed with the Beck Depression Inventory. Results confirmed a moderated-mediation effect, whereby craving mediated the relation between depressive symptoms and substance use among the treatment as usual group but not among MBRP participants.	Conclusion: "MBRP appears to influence cognitive an behavioral responses to depressive symptoms, partially explaining reductions i post intervention substance us among the MBPR group" (p. 362). Data from this study offer some preliminary empirical support for the benefits of integratin mindfulness training wit relapse prevention treatment an identify one potential mechanism of change following MBPR. Studies of related behaviors such as pathological gambling an binge eating could shed light on a potentially common rol of the relation between negative affective states and craving

							across a broader clas of addictive behaviors.

#11. Kelly, J.F., Magill, M., & Stout, R.L. (2009). How do people recover from alcohol dependence? A systematic review of the research on mechanisms of behavior change in Alcoholics Anonymous. *Addiction Research and Theory, 17*, (3). 236-259.	Academic Search Database. Key words: self-help, mutual help groups, addiction, alcoholism, recovery. No funding source or conflict of interest listed.	Level one level of evidence. Systematic review of research. "Empirical studies examining AA's mechanisms were located from searches in Pubmed, Medline, PsyINFO, Social Service Abstracts and from published reference lists" (p. 236). Thirteen studies completed full meditational tests. Another six were included that had completed partial tests.	The purpose of this study is to examine the research on mechanisms of behaviour change in AA. "Exactly how AA achieves these beneficial outcomes is less well understood, yet greater elucidation of AA's mechanisms could inform our understanding of addiction recovery and the timing and content of alcohol-related interventions" (p. 236).	See Section C on studies that are included in this systematic review, the databases searched etc. The following search terms were included: AA or Alcoholic Anonymous, or Self-Help or 12=step and mediators or mechanisms or process. The studies identified for inclusion were English language published between 1990 and 2007 (inclusive).	Studies of central interest were primary analyses from naturalistic research on community groups or 12-step oriented programs or secondary analyses from controlled clinical trials on TSF. "Included studies conducted formal tests of statistical mediation or an approximation" (p. 242).	The extracted studies' mechanisms of focus fell into three classes: 1. Common factors (i.e., self-efficacy, commitment to abstinence, active coping efforts, 2. specific AA practices and 3. more explicit constructs related to AA's theory of change (e.g. social network variables, spirituality variables).	"Despite AA's clearly "spiritual" roots, language and emphasis, this central aspect of AA has received very limited research attention. The few studies that have examined spirituality have not found it to be a clear mechanism" (p. 254). The authors' conclusion is that AA may have ignored its most potent influence on individuals' recovery- "that of social group dynamics in the AA meeting, the broader fellowship, and the expression of support that can be healing to many" (p. 252).

#12. Sobell, L.C. & Sobell, M.B. (2009). Randomized controlled trial of a cognitive-behavioral motivational intervention in a group versus individual format for substance use disorders. *Psychology of Addictive Behaviors, 23,* (4), 672-683.	Academic Premier Database. Key words: group therapy, motivational interviewing, cognitive-behavioral therapy, substance abuse, treatment, randomized controlled trial. Funding source not listed.	Randomized controlled trial. This RCT compared guided-self change (GSC) treatment, a cognitive-behavioral motivational intervention, conducted in a group versus individual format with 212 alcohol abusers and 52 drug abusers who voluntarily sought outpatient treatment. Level II level of evidence.	This study had three objectives: to determine whether the GSCTM (Guided Self-Change Treatment Model) could be effectively implemented in as group format, to evaluate the efficacy of GSC for treating drug problems and to evaluate the cost-effectiveness of GSC (Guided Self Change) treatment for treating drug problems and to evaluate the cost-effectiveness of GSC delivered in a group versus individual format.	The population is individuals with substance abuse disorder. The 287 eligible participants were blocked on gender and primary substance problem then randomly assigned to either group treatment or individual treatment. Participants have a primary alcohol problem (PAP) or a primary drug problem (PDP) and voluntarily entered an outpatient treatment program at the Guided Self Change unit of the Addiction Research Foundation in Toronto Canada. Criteria included: Signed an informed consent, at least 18 years of age, not mandated to treatment, no evidence of probable organic brain damage, adequate	Method Randomized Controlled Trial. Assessment of substance abuse and other variables occurred at pretreatment, throughout treatment and at 6-and 12 month post treatment follow ups. The pretreatment assessment lasted about 2-3 hours.	Outcome measures: The Timeline Follow back (TLFB), the Drug Use History Questionnaire (DUHQ), and the Situational Confidence Questionnaire (SCQ). "Treatment outcomes demonstrated significant and large reductions in client's alcohol and drug use during treatment at the 12-month follow-up with no significant differences between the group and individual therapy conditions" (p. 672). "A therapist time ratio analysis found that it took 41.4 % less therapist time to treat clients using the group versus the individual format" (p. 672).	"Health care cost containment compels further evaluations of the efficacy of group treatments for SUD's" (p. 672). Two lines of evidence demonstrate that the GSCTM was effectively implemented in a group format: the GT clients had comparable outcomes to IT clients and the groups demonstrated high cohesiveness, an important element for effective groups.

				reading ability, not currently in psychiatric or psychological treatment. Living in stable housing and agreed to a 12-month follow-up.			

#13 Lopez-Quintero, Hasin, D.S., Perez, J., Pines, A., Wang, S., Grant, B.F. & Blanco, C. (2010). Probability and predictors of remission from life-time nicotine, alcohol, cannabis or cocaine dependence: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Addiction, 106, 657-669.*	Academic Search Premier. Key Words: Alcohol, cannabis, cocaine, dependence, nicotine, remission. The National Epidemiologic Survey on Alcohol and Related Conditions was sponsored by the National Institute on Alcohol Abuse and Alcoholism with supplemental support from the National Institute on Drug Abuse. Work on this manuscript was supported by NIH grants, a grant from the American Foundation for Suicide Prevention and the New York State Psychiatric Institute.	Research Design: National Epidemiologic Survey using a nationally representative sample from U.S. adults selected in a three stage sampling design.	Aim to estimate the general and racial/ethnic specific cumulative probability of remission from nicotine, alcohol, and cannabis or cocaine dependence and to identify predictors of remission across substances.	Participants: Subsamples of individuals with life-time DSM-IV diagnosis of dependence on nicotine (n=6937), alcohol (n=4781), cannabis (n=530) and cocaine (n=408). The target population was the civilian non-institutionalized population 18 years and older residing in households and group quarters (college quarters, group homes, boarding houses and non-transient hotels). The survey included residents of the continental United States, District of Columbia, Alaska and Hawaii.	"Face to face computer-assisted interviews were conducted among a multi-stage cluster sample of 43093 respondents" (p. 657). Interviews were conducted by professional interviewers from the U.S. Census Bureau.	Race/ethnicity was self-reported and recorded into five groups. All diagnoses were made according to the DSM-IV criteria. Other outcome variables of remission and age at remission were determined by asking individuals with a life-time diagnosis of dependence specific questions. Findings: "Life-time cumulative probability estimates of dependence remission were 83.7% for nicotine, 90.6% for alcohol, 97.2% for cannabis and 99.2% for cocaine" (p. 657). Half of the cases of nicotine, alcohol, and cannabis and cocaine dependence remitted approximately 26, 14, 6 and 5 years after dependence onset, respectively.	"Males. Blacks and individuals with diagnosis of personality disorders and history of substance use co morbidity exhibited lower hazards of remission for at least two substances" (p. 657). Conclusion: "A significant proportion of individuals with dependence on nicotine, alcohol, cannabis, or cocaine achieve remission at some point in their lifetime, although the probability and time to remission varies by substance and racial/ethnic group" (p. 657). Other results are that approximately two-thirds of individuals with dependence on any of the substances assessed had a family history of substance use. "Rates of early substance use onset were

							highest among individuals with dependence, followed by cannabis, alcohol and cocaine" (p. 659).

#14. Martin, L.M., Smith, M., Rogers, J., Wallen, T., & Boisvert, R. (2011). Mothers in recovery: An occupational perspective. *Occupational Therapy International, 18,* 152-161.	CINAHL Database. Key words: mothers with addictions, occupational identity, psychosocial occupational therapy. No funding source listed.	Research design: Qualitative study: narrative inquiry with thematic analysis of data. Level of evidence: Level VI (Level of evidence obtained from a single descriptive study or a qualitative study).	Purposes of study: to discover the stories of mothers regarding their journeys to addiction and through recovery, to explore the impact of addiction on the occupational performance of mothers and to identify the factors perceived by these mothers as important in their treatment.	Population: Ten participants at various stages in the recovery process were interviewed. All were in some form of residential program at a centre in Southwest Florida at time of interview. All had histories of chronic addiction, with prior treatment and relapse episodes. Ages ranged from 18-47, nine were White and one was African American. Four participants were alcohol dependent and four were addicted to opiates. One had a history of cocaine use only whereas four had a history of cocaine, alcohol or opiates use also.	Interviews were conducted at the campus of the substance abuse treatment agency. Thematic analysis was conducted using an occupational perspective and language-concepts from the Occupational Therapy Practice Framework and the Model of Human Occupation.	Major themes were: Toxic environment, Opportunity in the environment and experimentation, Substance use for coping with environmental stress, Altered occupational identity, Disrupted performance patterns, Reduced performance capacity and ongoing issues and needs.	"Occupational therapists can contribute to the treatment team by helping persons with substance addictions rebuild their OI (occupational identity) along with performance patterns and performance capacity through meaningful occupations" (p. 158). Another implication is that "our informant's emphasis on the value of structure in their treatment environment suggests that some clients may need to learn to impose structure in their own lives in order to sustain their recovery after leaving treatment" (p. 159).

# 15. Kelly, P.J., Kay-Lambkin, F.J., Baker, A.L., Deane, F.P., Brooks, A.C., Mitchell, A., Marshall, S., Whittington, M., & Dingle, G.A. (2012). Study protocol: A randomized controlled trial of a computer-based depression and substance abuse intervention for people attending residential substance abuse treatment. *BMC Public Health, 12*, (113). doi:10.1186/1471-2458-12-113	Key Words: depression, substance abuse, CBT, alcohol, computer-based. Funding sources: Australian Rotary Health Fund and the Salvation Army.	Research Design: Prospective Randomized Controlled Trial. Participants will be recruited from residential rehabilitation programs operated by the Australian Salvation Army. Participants will be randomly assigned to either a computer delivered substance abuse and depression intervention or to a computer delivered typing tutorial. Randomization will be stratified by gender, length of time the participant has been in the program, and use of anti-depressant medication.	Aim of this study will be to provide comprehensive data on the effect of introducing a computer delivered cognitive behavioral therapy based co-morbidity treatment program within a residential substance abuse setting.	"All participants who satisfy the diagnostic criteria for an alcohol or other substance dependence disorder will be asked to participate in the study" (p. 1).	Participants in both the computer based substance dependence/depression program and the computer typing program will complete sessions twice per week over a five week period, Research staff blind to treatment allocation will complete the assessments at baseline, and then at 3, 6, 9, and 12 months post intervention.	The two primary outcome variables will be level of substance sue and level of depression. Outcome measures will include the Addiction Severity Index, the Opiate Treatment Index. The Timeline Follow-Back Method will be used to improve participants' recall of their alcohol and substance use on the ASI and OTI. This is an ongoing current study, therefore results are not available.	"To ou knowle this is t first stu to exan the use comput based comorb interve within a residen substan abuse setting' 8).

#16. McKay, J.R. & Hiller-Sturmhofel, S. (2011). Treating alcoholism as a chronic disease. *Alcohol Research & Health, 33,* (4). 356-370.	Academic Search Database. Keywords Alcohol and other drug disorders (AODD), disease theory of alcohol and other drug use (AODU), chronic disease treatment, treatment models, treatment outcomes, abstinence, relapse, self-help groups, 12-step model, continuing care, long-term care, alternative treatment, treatment research. No funding source identified.	This article is a review of traditional approaches for alcohol and other drug disorders, continuing care and summary of evidence for effectiveness. This article also reviews new models of extended treatments.	The purpose of this article is to examine alternative approaches to enhance treatment retention in both initial and continuing care. "Many patients drop out of initial treatment or do not complete continuing care" (p. 356).	This article reviews studies of continuing care interventions for persons with alcohol and other drug use disorders.	This review provides a selective of available treatment options. Literature searches of the Medline and PsychInfo databases were performed using various combinations of key words: Alcoholism, alcohol dependence, substance dependence, continuing care, step-down care, stepped-care, disease management and aftercare.	The authors drew general conclusions about existing controlled studies of continuing care interventions. Studies of more recent interventions are more likely to find positive results than older studies. "This suggests than both the interventions and their evaluations have improved in recent years" (p. 359). Also interventions that had a longer duration of at least 12 months or in which greater efforts were made to reach and engage patients appeared to be more effective.	Conclusions: The studies suffered from a range of limitations that point to areas to be addressed in future research. "Little is known about the mechanisms that contribute to the interventions' efficacy in studies in positive outcomes" (p. 359). Another limitation is that the rates of participation in continuing care and retention rates were relatively low. The magnitude of the observed effects varied substantially between studies and sometimes was relatively small.

# 17. Dadich, A. (2010). Expanding our understanding of self-help support groups for substance use issues. *Journal of Drug Education, 40,* (2). 189-202.	Key words: Self-help, substance use, support groups, 12-step, fellowships. No funding source identified.	Qualitative interpretive methodology. Semi-structured, open-ended interviews of 12-step participants. Level VI.	Purpose of this study is to explore experiences and perceptions of younger people with substance abuse issues who were involved in 12 step fellowship.	Research participants were between ages 20-29 years, the gender balance was almost equal. The sample was a cohort of 17 young people all of whom experienced substance use issues and had been involved in a 12 step fellowship to address these issues.	The research participants represented two 12 step fellowships. The research participants had been involved with their respective groups for over 3 years and attended an average of 18 meetings per month. Following each interview a transcription was created and forwarded to each research participant who had an opportunity to modify his/her contribution to the study. The transcript was then coded for analysis. Three questions were considered: What is of interest here? Why is this of interest? Why am I interested in this? Themes of interest were grouped together and these codes were continually revised to ensure a degree of	Results: "The themes suggest the benefit associates with involvement in a 12 step fellowship may not be synonymous with improved outcomes on substance abuse but may offer other gains that are important to those who experience substance use issues" (p. 198).	Themes identified included themes of connectedness, support, opportunities to learn including articulation skills. The authors suggest the themes identified invite use to reconsider current understandings of Self-help support groups. "Such reflection may give rise to a broader view of these groups, whereby they are valued, not only for their role in reducing substance use, but also in fostering connectedness, support and learning opportunities among group participants" (p. 198).

					consistency within each code and reduce duplication across the codes.		

# 18. Moos, R.H. (2008). Active ingredients of substance us-focused self-help groups. *Addiction, 103,* 387-396.	Key words: Abstinence, bonding, coping, goal direction, self-efficacy, self-help, structure. Funding Sources: Department of Veterans Affairs Health Services Research and Development Service Funds and NIAAA Grant.	This paper provides an overview of some of the probable active ingredients of self-help groups in light of four related theories. This is a qualitative study-Review study and a Level VI.	The purpose of this paper its o provide an overview of some of the probable active ingredients in focused-self-help groups The four main theories of social control theory, social learning theory, Behavioral economics or behavioral choice theory and stress and coping theory are described.	Ingredients of self-help groups are discussed including consideration of indices of Alcoholics Anonymous affiliation as active ingredients.	The author used these four theories and categorized the aspects of self-help groups.	Key active ingredients specified by social control, social learning, behavioral choice and stress and coping theories are listed in table I of this article.	"There is reasonable evidence to indicate that support, goal direction and structure, abstinence-oriented norms and role models, involvement in alternative rewarding activities and a focus on self-efficacy and coping skills are some of the active ingredients responsible for the positive influence of SHG's" (p. 394).

#19. McCartney, D. (2010). Staying off the bottle: Maintaining recovery from alcohol addiction through mutual aid. *Healthcare Counseling and Psychotherapy Journal, 10*, (4). 8-13.	CINAHL with Full Text. Key words: Alcoholics Anonymous, Recurrence, Prevention and control, Substance abuse, therapy. No funding source listed.	Research design: case study. This article explores the concept of mutual aid and looks at the current status in the United Kingdom and "the evidence base for its effectiveness and outlines practical techniques that professionals can adopt to enhance the benefits of mutual-aid to clients" (p. 9). Level of evidence is level III case studies in the four Tiered levels of evidence table (Houser & Oman, 2011).	(See section C also). "White makes a strong case for a joined up approach between treatment professionals and mutual-aid recovery groups which includes seeing professional treatment as an adjunct to mutual aid groups rather than the other way around" (p. 9).	Population is persons with alcohol addiction and members of mutual-aid groups.	This paper presents a case study of "Lain" aged 33 who has had a history of problematic drinking since his early teenage years.	The outcome for this one case study is that two years since his admission to AA, he has maintained his recovery by continuing to attend AA meetings and is involved as a literature secretary in his home group.	The author concludes that practitioners need to know something about the evidence based philosophy and content of the AA program.

#20 Vedherhus, J., Timko, C., Kristensen, O., & Clausen, T. (2011). The courage to change: Patient perceptions of 12-step fellowships. *BMC Health Services Research, 11*, (339).	Medline database. Key Words: 12-step, Substance Use Disorder, TSG. Funding by the Norwegian Research Council.	Single descriptive study (Level VI). The researchers analyzed factors associated with the intention to participate in TSG's post discharge with contingency tables and ordinal regression analysis.	Objectives: Explore patient perceptions of the benefits and barriers of TSG's at admission to a detoxification unit (detox) and investigate the relationship between patient perceptions of TSG's and the intention to participate in these groups following discharge.	Patients were recruited from a detox unit in the Addiction Unit in Norway. The final sample included 139 patients (89% of eligible respondents). Eligible patients had an alcohol or drug use disorder, did not receive opioid maintenance treatment, remained in the detox unit sufficiently long for assessment, were discharged to their homes and had access to at least one TSG within 30 km of their home. Exclusion criteria were severe psychiatric co-morbidity and an inability to complete a structured interview (severe somatic symptoms, cognitive disability, or language problems).	Descriptive statistics were computed for all variables. Contingency table analysis and Chi-square or non-parametric tests were used to explore associations between the intention to participate in TSG's and independent variables. A multivariate ordinal regression analysis was performed.	Addiction Severity Index European Version (EuropASI) was used and the *Survey of Readiness for AA Participation* (SYRAAP) measured the patients' perceived severity of the substance problem and the patients' of the relevance of TSG's to their problem. These were measured with the *perceived benefits and perceived barriers* items. The *intent to attend AA/NA* was rated with two questions on a 7-point Likert scale. "Respondents saw more advantages than disadvantages in TSG participation, but only 40% of patients showed high intentions of participating in TSG's post discharge" (p. 1).	"Overall our findings suggested that a majority of patients could potentially be motivated to attend TSH's with a relatively simple strategy. The primary strategy would be to highlight the potential gains of participation" (p. 7).

#21. Dutra, L., Stathopoulou, G., Basden, S.L., Leyro, T.M., Powers, M.B., & Otto, M.W. (2008). A Meta-analytic review of psychosocial interventions for substance use disorders. *American Journal of Psychiatry, 165,* 179-187.	Medline Database. Key words: Substance Use Disorders (SUD), interventions, meta-analysis, treatments. Funding Source: Grant from National Institute of Drug Abuse and an additional Minority Supplement award.	Meta Analysis Level I	Study Objective: According to the authors, the relative success of psychosocial interventions has not been well documented therefore the authors provide effect sizes for various types of psychosocial treatments as well as abstinence and treatment retention rates for cannabis, cocaine, opiate, and polysubstance abuse and dependence treatment trials.	Population: treatments for patients with cocaine, opiates, cannabis, and polysubstance abuse and dependence.	"Randomized, controlled, clinical trials were selected for inclusion in this meta-analysis. PsycINFO and MEDLINE databases were searched. (Page 181 lists the detailed inclusion criteria for the studies). The authors identified a total of 34 well-controlled treatment conditions, representation the treatment of 2, and 340 patients.	"Overall, controlled trial data suggest that psychosocial treatments provide benefits reflecting a moderate effect size according to Cohen's standards" (p. 179). The interventions were the most efficacious for cannabis use and least efficacious for polysubstance use.	"Effect sizes for psychosocial treatments for illicit drugs ranged from the low-moderate to high-moderate range depending on the substance disorder and treatment under study" (p. 179). The authors concluded that current evidence suggests the average patient undergoing psychosocial interventions achieves acute outcomes better than approximately 67% of patients in control conditions.

# 22 Gossop, M., Stewart, D., & Marsden, J. (2007). Attendance at narcotics anonymous and alcoholics' anonymous meetings, frequency of attendance and substance use outcomes after residential treatment for drug dependence: A 5-year follow-up study.	Medline database. Key Words: Aftercare, alcohol, heroin, Narcotics Anonymous, treatment outcome and 12 steps. No funding sources listed.	Research design is a longitudinal prospective cohort design. Level IV.	Aim to investigate the relationship between frequency of attendance at NA and AA meetings and substance abuse outcomes after residential treatment of drug dependence.	Study sample was drawn from drug-dependent patients recruited to the National Treatment Outcome Research Study. Participants were recruited from 23 agencies. The study sample was drawn from an eligible follow-up sample of 255 patients. At 2 years 202 patients (79%) were interviewed and at 4-5 years 178 or 70% were interviewed. Almost all or 91% were interviewed at either follow-up point. Criteria for agency participation included location of the service and capacity to recruit a sufficient number of cases to the project.	Interviews were conducted at intake, 1 year, 2 years and 4-5 years follow-up. Data were collected by structured interviews. The intake characteristics and problems of the follow-up sample and the remainder of the clients from the eligible sample (n=113) were compared using logistic regression analysis.	Measures of substance use behaviors and problems were taken for the previous 90 days. Urine screening was conducted on patients from programs selected randomly on a one in two basis at intake and at 1 year follow-up. "Abstinence from opiates was increased throughout the 5-year follow-up period compared to pre-treatment levels. Clients who attended NA/AA after treatment were more likely to be abstinent from opiates at follow-up" (p. 119). There was no overall change in alcohol abstinence after treatment but clients who attended NA/AA were more likely to be abstinent from alcohol at all follow-up points.	Conclusions: NA/AA can support and supplement residential addiction treatment as an aftercare resource. "The improved alcohol outcomes of NA/AA attendees suggests that the effectiveness of existing treatment services may be improved by initiatives that lead to increased involvement and engagement with such groups" (p. 119).

#23. Morgenstern, J., & McKay, J.R. (2007). Rethinking the paradigms that inform behavioral treatment research for substance use disorders. *Addiction, 102,* 1377-1389.	Medline. Key words: behavioral treatments, mechanisms of change, substance use disorders and treatment process. Grants from the National Institute on Alcohol Abuse and the National Institute on Alcohol Abuse and Alcoholism.	Review of four treatment approaches. Review was limited to RCT's treating primarily substance-dependent samples. When possible the authors chose meta-analytical reviews, then comprehensive reviews that fell short of meta-analysis and lastly the authors conducted their own review across studies, Level one.	"The paper identifies several testable assumptions of the psychotherapy technology model" (p. 1377).	This review was limited to RCT's treating primarily substance-dependent samples. Treatment studies for substance abuse and brief interventions in non-treatment seeking samples were excluded. Studies of primary alcohol, stimulant and marijuana dependence as well as mixed samples were included but excluded were primary opiate dependence.	Searches were conducted on standard search engines (medline) on internet search engines and by contacting colleagues to inquire about any relevant in press papers.	The authors write this review suggests weak support for the technology model of psychotherapy research i.e. Randomized controlled trial.	Conclusions: "Th addiction treatment researcl field is coming up against the limitations of the psychotherapy technology mode as the dominant paradigm guiding treatment research. It is important for addiction treatment researchers to explore alternative conceptualization and methodologies in order to understand more clearly how treatment works" (p. 1377).

#24. Donovan, D.M. & Wells, E.A. (2007). Tweaking 12 step the role of 12-step self-help group involvement in methamphetamine recovery. *Addiction, 102*, (1). 121-129.	Medline. Keywords: 12-step. Alcoholics anonymous, cocaine anonymous, crystal meth anonymous, methamphetamine narcotics anonymous, recovery, self-help, treatment. Funding from the Cooperative Agreement as part of the National Institute on Drug Abuse Clinical Trials Network. U.S. National Institutes of Health.	Review of the literature on outcomes associated with 12-step meeting attendance and involvement with 12-step activities, particularly those who abuse meth.	Aim is to determine from a review of the available literature the extent to which involvement in 12-step mutual support groups could play a role in the recovery process for individuals abusing or dependent on methamphetamine.	Population is individuals abusing or dependent on methamphetamine.			There are few if any data available on meth abusers and their use of 12-step approaches. "Evidence derived from work with alcohol and cocaine-dependent individuals indicates that involvement in 12-step self-help groups both attending and engaging in 12-step activities is associated with reduced substance use and improved outcomes" (p. 121).

#25. Melberg, H.O. & Humphreys, K. (2010). Ineligibility and refusal to participate in randomized trials of treatments for drug dependence. *Drug and Alcohol Review, 29,* 193-201.	Medline. Key Words: selection bias, randomization, eligibility criteria. Funding by the Norwegian Institute for Alcohol and Drug Research and he Health Economics Research Programme at the University of Oslo. One of the authors also received a Career Research Scientist award from the U.S. Department of Veterans Affairs.	A total of 98 clinical trials were drawn for analysis from a systematic review of the drug dependence treatment literature. Level I	The aim of this study is to examine the extent to which drug-dependent patients are ineligible for or unwilling to participate in randomized clinical trials.	Selection process: 5888 articles from Medline Cochrane Library, studies initially indexed as RCT's. From these 173 RCT's were selected dealing with psychosocial and pharmacological treatment of drug use. Final selection 98 RCT's published in journals that specialize in substance abuse.	Synthesis methods: the information from the randomized trials was summarized under three headings. 1. The number of potential subjects available for recruitment. 2. Those that were excluded as ineligible according to the criteria for participation in the experiment. 3. Individuals who refused to participate in the randomized experiment.	"The trials reviewed excluded an average of 29 % of potential subjects as ineligible, a further 29% of the eligible subjects were unwilling to participate". (p. 193).	"Drug-dependent trial subjects are a minority of all drug patients seen in real-world clinical practice. It is necessary to improve the reporting of these potential problems in randomized trials. Systematic reviews of the literature ought to use this information to distinguish reliable from less reliable findings" (p. 193).

#26. Howard, V. & Holmshaw, J. (2010). Inpatient staff perceptions in providing care to individuals with co-occurring mental health problems and illicit substance use. *Journal of Psychiatric and Mental Health Nursing, 17,* 862-872.	Medline. Keywords: attitudes, co-occurring substance use, inpatient staff. No funding source listed.	Study design: Mixed methods approach to obtain both quantitative (questionnaire survey) and qualitative (interview study) data. Level VI (evidence obtained from a qualitative study). The quantitative portion of this study was a non-randomized study design.	The purpose of this study was to identify key themes from multidisciplinary staff regarding their views and experiences working with mental health patients who use illicit substances. This study was "designed to explore factors which participants felt helped and hindered them in working with inpatient service users with these co-occurring issues" (p. 864).	Population was inpatient multidisciplinary staff members from one sector of a mental health Trust. This included one assessment and admissions ward, five mental health treatment wards and three residential mental health rehabilitation units. Thirty-six percent response rate was achieved from a distribution of 270 questionnaires. The interview study was comprised of in-depth interviews with ten multidisciplinary staff.	Questionnaire data were analyzed using SPSS. The socio-demographic data were summarized using frequencies and percentages. The DDPPQ (Drug and Drug Problems Perceptions Questionnaire) scores were assessed using means and standard deviations. Differences of scores between different groups of participants were tested using ANOVA and Unrelated Samples t-test. Statistical significance was taken at the 5% level.	Outcome measures included the DDPPQ (Drug and Drug Problems Perceptions Questionnaire and Interviews.	Key findings of this study have found that staff who had received training held less negative attitudes towards illicit substance users regardless of their length of clinical work experience or type of work setting" (p. 871).

# 27 Magura, S. (2007). The relationship between substance user treatment and 12-step fellowships: Current knowledge and research questions. *Substance Use and Misuse, 42*, 343-360.	Medline. 12-steps, Alcoholics Anonymous, mutual aid, addiction treatment, recovery, spirituality. Funding by a grant from the National Institute on Drug Abuse.	This article reviews and synthesizes information about the relationship between formal "addiction treatment" and 12-step mutual aid. Level 6 evidence obtained from expert opinion. Magura is Director of Science and Research at National Development and Research Institutes, New York City. (See notes in column J).	This article addresses the overlap between treatment and 12-step participation, differences and similarities between these two approaches and poses pertinent questions that could be answered by additional research.	The population addressed is substance users.	Synthesis methods: The author compares formal treatment and 12-step programs (Principles, practices and processes).	"This article concludes with a proposed re-conceptualization of the relationship between formal treatment and 12-step mutual aid that may help in structuring future research" (p. 343).	The author proposes a "different scheme to classify intervention models for addictive and other substance use-related behaviors" (p. 354).

28 Frick, K.M., Loessi< B., Brueck, R.K., Ktiston, R.K., Jaehne, A., Riemann, D., Gann, H., Batra, A., Wodarz, N., Mann, K.F. & Berner, M.M. (2011). What works for patients in outpatient treatment for alcohol addiction? An explorative study into clients' evaluation of subjective factors and therapy satisfaction. *Substance Abuse: Research and Treatment, 5,* 27-34.	Medline. Keywords: alcohol addiction, outpatient treatment, therapy satisfaction, supportive factors, subjective assessment. Supported by a grant from the German Federal Ministry of Education and Research.	This explorative survey investigated clients' evaluation of therapy elements and other supportive factors within a randomized controlled trial. "Project PREDICT was a 6-year randomized double-blind and placebo controlled clinical trial in seven German study centers and consisted of two consecutive RCTs in a stepped care model" (p. 28). Level II level of evidence.	(Also see section C). "Of specific interest was which therapy elements were perceived as particularly effective and if patients identified any new factors" (p. 28).	A total of 427 participants were recruited from inpatient detoxification programs at respective centers.	Data collection was conducted by means of a semi-structured questionnaire comprising questions developed by the authors and the Helping Alliance Questionnaire (HAQ) in the German translation. Part of the questionnaire included three areas of inquiry: Subjective assessment of treatment elements (SUFA), supportive factors (SUFA) and a free text field as an option.	The severity of addiction was measured with the German version of the Structural Clinical Interview for DSM III-R (SCID) and the Alcohol Use Disorders Identification Test (AUDIT). "Pharmacotherapy was rated significantly less effective than "MM" (medical management) and "global study attendance ($p<0.001$). (p. 26).	Forty nine of 51 study participants attended a follow up visi three months after the 6-month treatment pha completed the survey questionnaire. Fifteen patien visited a self-help group, four patients took part in th alcoholism-specific psychotherapy (ASP) and ten patients received some other nonspecified external therapy. Results showe that participan valued the regular low ke interactions provided by MM (medical management) as an importa and effective intervention. I seems to suggest that even a medication only therapy for alcohol dependence should always include regula low-key contacts such as MM.

#29 Walitzer, K.S., Dermen, K.H., & Barrick, C. (2009). Facilitating involvement in Alcoholics Anonymous during out-patient treatment: a randomized clinical trial. *Addiction, 104,* 391-401.	Medline database. Key words: Alcoholics Anonymous, alcoholism treatment, mediation, motivation enhancement, randomized controlled trial, treatment outcomes. Funding support included a NIH Grant.	Randomized Controlled trial with assessments at baseline, end of treatment and 3, 6, 9 and 12 months after treatment. Level II level of evidence.	Aim: Evaluate two strategies to facilitate involvement in AA (A 12-step-based directive approach and a motivational enhancement approach during skills-focused individual treatment.	Participants a total of 169 alcoholic out-patients (57 women) assigned randomly to one of three conditions: a directive approach to facilitating AA, a motivational enhancement approach to facilitation AA or treatment as usual, with no special emphasis on AA. Criteria: surpassed 6th grade, no legal or employer mandate for treatment, willing to attend 12 weekly sessions, drinking during the last 3 months, no IV drug use in the past 3 months and at least 18 years old.	Clients were recruited from the outpatient Clinical Research Center at the Research Institute on Addictions in Buffalo New York. Of the 297 eligible callers, 224 presented for an intake interview, yielding intent to treat sample of 169 individuals. All clients received a 12 session manualized skills-based treatment package.	Three alcohol involvement dependent variables were evaluated including the DrinC (Drinker Inventory of Consequences). "Participants exposed to the 12-step directive condition for facilitating AA involvement reported more AA meeting attendance, more evidence of active involvement in AA and a higher percentage of days abstinent relative to participants in the treatment as usual comparison groups (p. 391).	"These results suggest that treatment providers can use a 12-step based directive approach to effectively facilitate involvement in AA and thereby improve client outcome" (p. 391).

#30. Gilchrist, G., Moskalewicz, J., Slezakova, S., Okruhlica, L., Torrens, M., Vajd, R., & Baldaccino, A. (2011). Staff regard towards working with substance users: A European multi-centre study. *Addiction, 106,* 1114-1125.	Medline. Keywords: Alcohol users, cross-sectional study, drug users, Europe, general psychiatry, Medical Condition Regard Scale, primary care, specialist addiction services, staff attitudes. Funding received from the European Commission. Co-funding received from the Generalitat de Catalunya for the research conducted in Catalunya, Spain.	Research design is a multi-centre cross-sectional comparative study. Level of evidence IV (non-experimental study).	Aim: To compare regard for working with different patient groups (including substance users among different professional groups in different health-care settings in eight European countries.	Sample size 866 staff and 253 services enabled comparisons between staff and treatment entry points in different European countries with different health care systems to be conducted for each patient group.	Descriptive statistics were calculated using SPSS. Total scores, mean and standard deviations were calculated for regard to working with each of the four patient groups studied: drinkers, drug users, patients with depression and patients with diabetes. T-tests and ANOVA were used to examine differences in regard for different conditions by sex and age of professional, duration in their profession type and treatment entry point.	The Medical Condition Regard Scale (MCRS) was chosen as it is the "only available scale that evaluates "regard" to patients with problems related to drug and alcohol use with control conditions" (p. 1115). Overall staff reported a significantly lower regard for substance users than for patients with depression or diabetes.	"We found that regard for working with substance users, especially drug users, was lower than regard for working with patients with depression or diabetes" (p. 1119). This finding was consistent across all eight European countries and was especially evident in primary care. "Overall staff from primary care had the lowest regard for substance users" (p. 1119).

#31. Frausto, K.A., & Bazargan-Hejazi, S. (2009). Who is ready to change illicit drug behavior: An Emergency Department Study. *Substance Abuse: Research and Treatment, 3*, 53-60.	Medline database. Keywords: illicit drug use, readiness to change, emergency department. Funding was provided by the National Institute on Drug and Alcoholism. .	Research design: Retrospective analysis of secondary data collected from a sample of ED patients at the King Drew Medical Center in CAD. Data was analyzed using SPSS software and descriptive statistics (ANOVA). Multiple linear regression analysis was used to examine the independent impact of predictor variables on the outcome measure, adjusting for the confounding (socio-demographic variables). A p-value of <_ to 0.05 was considered to be statistically significant. Level IV (evidence obtained from a single descriptive study).	Objective: "To identify emergency department patients who are ready to change their illicit drug use behavior" (p. 53).	Population size 198 Emergency Department Patients at least 18 years old seeking ER services, using at least one illicit drug and scoring positive for alcohol problem based on CAGE score greater than or equal to 1. Participants were eligible if at least 18 years old, presented to the ED, spoke English or Spanish and were identified as having problem drinking using CAGE screening questions.	Patients excluded from the study were those who 1. Reported receiving professional alcohol counseling within the past 12 months, 2. Showed signs of cognitive impairment. 3. Required immediate medical treatment that prevented them from being interviewed or were in police custody. For the current study the criteria was also limited to patients who reported using at least one type of illicit drug within the past 12 months. This narrowed the study sample to 198 patients who both had an alcohol problem and reported using at least one type of illicit drug within the last 12 months.	The main outcome variable was readiness to change drug behavior and was measured by the *"Readiness to Change Ruler"* .The two main independent variables were 1. Having a primary care provider and 2. Exposure to violence. Other variables were: number of illicit drug use, injuries related to drug use and readiness to change alcohol behavior. ANOVA showed four variables as significantly associated with readiness to change alcohol behavior: (Drug use, health insurance, drug-related injuries, and readiness to change alcohol behavior). $p<0.05$.	"Contrary to the study hypothesis, having a primary care physician and exposure to violence was not significantly associated with drug behavior" (p. 56). The findings revealed that ED patients who had health insurance were *less* likely to report a readiness to change drug use behavior. One possible explanation is that patients who had health insurance had more access to regular care and therefore did not feel the need to change. "Other possibility could be that these patients due to having health insurance had more access to regular care and therefore didn't feel the need to change" (p. 59). Other

							possible explanation is that these patients were using less severe drugs.

# 32. Shinebourne, P. & Smith, J.A. (2011). Images of addiction and recovery: An interpretative phenomenological analysis of the experience of addiction and recovery as expressed in visual images. *Drugs:*	psycINFO database. Key words: Addiction, life experiences, recovery (disorders), adulthood, middle age. No funding sources listed.	Qualitative study. The data for this article were drawn from a study of six female participants recruited through recovery programs. The data were analyzed using interpretative phenomenological analysis. Level VI (evidence	"This article focuses on visual representations of subjective experiences of the process of recovery from addiction and the meanings that participants attribute to their visual work" (p. 313).	Population size six female participants. Potential participants were informed in advance that they would be asked to draw during the interview. This study focused on one participant's artwork. At the time of the interview	Participants were asked to bring to the interview some artwork made during their engagement in creative activities provided by the agency at some stage in their recovery. Drawing materials were provided. "This was an	"The analysis comprised both the drawings and the transcripts, moving between the image and the corresponding text" (p. 313).	Three main themes are presented: 1. I see things through different eyes now relates to the representation of recovery at present. 2. "I couldn't see anything on the horizon" shows images that symbolize her sense	"Images like metaphors, may provide a "safe bridge" to express feelings that might be too painful to address directly" (p. 319). One limitation of this study is that the request ot draw as part of an interview may evoke anxiety for some	Lakoff and Johnson (1980) present metaphors as one of our most important tools for trying to comprehend patially what cannot be comprehended totally: our feelings, aestetic experiences, moral practices and spiritual awarenes

#33. White, W.L.(2004). Addiction recovery mutual aid groups: An enduring international phenomenon. *Addiction, 99*. 532-538.	psycINFO database. Key words: Keywords: addiction, alcohol rehabilitation, community services, recovery (disorder). No funding support listed.	Essay using a literature review of the history of mutual aid groups. Level of evidence VII.	The purpose of this essay is to review the history of mutual aid groups in connection with AA groups.	N/A (this essay concerns mutual aid groups for persons who are addicted to alcohol).	This is not an actual study.	N/A	American recovery circles constitute the earliest abstinence-based mutual aid recovery societies between 1737 and 1840, messianic Native Leaders …achieved sobriety through profound conversion like experiences" (p.	This article (essay) is interesting and informative reading on the historical background of mutual aid groups.	

#34. Condon, T.P., et al. (2011). Patient relapse in the context of drug abuse treatment. *Journal of Addictive Medicine, 5,* 157-162.	psyINFO Keywords: addiction, discharge policies, drug abuse treatment, relapse. The authors declare no sources of support other than that affiliated with their salaries.	Commentary. Level of evidence VII.	"How do addiction treatment programs integrate the expectation of relapse into drug abuse treatment? This article serves as a thought piece to pose questions rather than definitive solutions" (p. 157).	N/A	Commentary not a study design.	authors write that the medical model shoud be the model for addiction treatment services. "With other diseases, when patients exhibit the central symptoms of the disease during treatment, it generally calls for	authors purpose indentifying aternatives to punitive approaches as another area of real research need. "Little evidence exists of persistent efforts to treat patients who relapse repeatedly or chronicallly" (p.	One major strength of this commentary is the inclusion of research needs on relapse and administrative discharge.	"Perhaps more importantly, addiction, being a chronic progressive disease, like diabetes or heart disease, may result in significant morbidity and death if present and left untreated" (p. 158).

#36 Rush, B. (2012). A perspective on the effectiveness of interventions for alcohol and other substance use disorders. *Canadian Journal of Psychiatry*, *57*, (6).	psycINFO Alcohol abuse, decision making, intervention, mental disorders, treatment, effectiveness, evaluation. Salary and support provided by the Ontario Ministry of Health and Long Term Care.	Guest Editorial. Level VII.	Commentary on two papers in a Review Series in this *Canadian Journal of Psychiatry*.	This article is not a stand alone study but an editorial.	The author lists 5 broad contextual factors that the reader of these two reviews must consider when reading and these reviews. 1. The trend in the last few years "in most specialized treatment settings had been toward a diverse,	B. Rush writes while these two reviews focus on the interventions. "someone has to engage the client and deliver them with competence, respect and empathy" (p. 340). 3. "Interventions covered in the 2 reviews	Rush calls for improved educational curricula and continuing education programs. "To effect a population-level impact, substance use treatment must become everyone's business" (p. 340).	Rush writes that there is a significant gap between what interventions we know work and what is routinely delivered in practice settings.	The limitation of this article is that of course it is not a study but instead a "guest editorial" therefore it is not high on the level of evidence table. That said, this article has significant concepts to consider.

#37, Hien, D.A., Jiang, H., Campbell, A.N.C., Hu, M., Cohen, L.R., Brigham, G.S., Capstick, C., Kulaga, A., Robinson, J., Suarez-Morales, L., & Nunes, E.V. (2010). Do treatment improvements in PTSD severity affect substance use outcomes? A secondary analysis from a Randomized clinical trial in NIDA's clinical trials network. American Journal of Psychiatry, 67, (1), 95-101.	Medline. Key words: substance use, RCT, PTSD, treatment. National Institute on Drug Abuse Grant.	Secondary analysis from RCT. Participants were randomly assigned to 12 sessions of either trauma-focused or health education treatment. Level two.	Objective: The purpose of the analysis was to examine the temporal course of improvement in symptoms of PTSD and substance use disorder among women in outpatient substance abuse treatment.	Sample size 353 women. Criteria: meeting DSM-IV criteria for PTSD, substance abuse within the last 6 months & a current diagnosis of drug or alcohol abuse or dependence. Age 18-65, proficiency in English. Exclusion criteria: significant risk of suicidal/homicidal intent or behavior, history of schizophrenia, or active past 2 months psychosis.	Seven community-based treatment programs offering outpatient treatment participated in the study. Statistical analysis by a continuous Markov model and generalized linear model was applied for repeated outcome measures.	Outcome measures included the Addiction Severity Index -Lite and the PTSD symptom scale. Results PTSD improvement was associated with subsequent substance use improvement. "Trauma-focused treatment was significantly more effective than health education in achievement substance use improvement but only among those who were heavy substance users at baseline and had achieved significant PTSD reductions.	"PTSD severity reductions were more likely to be associated with substance use improvement with minimal evidence of substance use symptom reduction improving PTSD symptoms" (p. 95).	Limi 40% samp absti basel there the f may gene to a prim alcoh depe samp coho cons main wom Rece addit treat may influ outc

[illegible] D.A., Jiang, H., Campbell, A.N.C., Hu, M., Cohen, L.R., Brigham, G.S., Capstick, C., Kulaga, A., Robinson, J., Suarez-Morales, L., & Nunes, E.V. (2010). Do treatment improvements in PTSD severity affect substance use	Medline. Key words: substance use, RCT, PTSD, treatment. National Institute on Drug Abuse Grant.	Secondary analysis from RCT. Participants were randomly assigned to 12 sessions of either trauma-focused or health education treatment. Level two.	Objective: The purpose of the analysis was to examine the temporal course of improvement in symptoms of PTSD and substance use disorder among women in outpatient substance abuse treatment.	[illegible] size 353 women. Criteria: meeting DSM-IV criteria for PTSD, substance abuse within the last 6 months & a current diagnosis of drug or alcohol abuse or dependence. Age 18-65, proficiency in English. Exclusion criteria: significant risk of	Seven community-based treatment programs offering outpatient treatment participated in the study. Statistical analysis by a continuous Markov model and generalized linear model was applied for repeated outcome measures.	[illegible] measures included the Addiction Severity Index -Lite and the PTSD symptom scale. Results PTSD improvement was associated with subsequent substance use improvement. "Trauma-focused treatment was significant	"PTSD severity reductions were more likely to be associated with substance use improvement with minimal evidence of substance use symptom reduction improving PTSD symptoms" (p. 95).	[illegible] s: 40% of the sample was abstinent at baseline, therefore the findings may not generalize to a primarily alcohol dependent sample. The cohort consisted mainly of women. Receiving additional treatment may have influenced	"Results support the self-medication model of coping with PTSD symptoms and an empirical basis for integrated interventions for improved substance use outcomes in patients with severe symptoms" (p. 95).

#37, Hien, D.A., Jiang, H., Campbell, A.N.C., Hu, M., Cohen, L.R., Brigham, G.S., Capstick, C., Kulaga, A., Robinson, J., Suarez-Morales, L., & Nunes, E.V. (2010). Do treatment improvements in PTSD severity affect substance use outcomes? A secondary analysis from a Randomized clinical trial in NIDA's clinical trials network. American Journal of Psychiatry, 67, (1), 95-101.	Medline. Key words: substance use, RCT, PTSD, treatment. National Institute on Drug Abuse Grant.	Secondary analysis from RCT. Participants were randomly assigned to 12 sessions of either trauma-focused or health education treatment. Level two.	Objective: The purpose of the analysis was to examine the temporal course of improvement in symptoms of PTSD and substance use disorder among women in outpatient substance abuse treatment.	Sample size 353 women. Criteria: meeting DSM-IV criteria for PTSD, substance abuse within the last 6 months & a current diagnosis of drug or alcohol abuse or dependence. Age 18-65, proficiency in English. Exclusion criteria: significant risk of suicidal/homicidal intent or behavior, history of schizophrenia, or active past 2 months psychosis.	Seven community-based treatment programs offering outpatient treatment participated in the study. Statistical analysis by a continuous Markov model and generalized linear model was applied for repeated outcome measures.	Outcome measures included the Addiction Severity Index -Lite and the PTSD symptom scale. Results PTSD improvement was associated with subsequent substance use improvement. "Trauma-focused treatment was significantly more effective than health education in achievement substance use improvement but only among those who were heavy substance users at baseline and had achieved significant PTSD reductions.	"PTSD severity reductions were more likely to be associated with substance use improvement with minimal evidence of substance use symptom reduction improving PTSD symptoms" (p. 95).	Limi 40% samp absti basel there the f may gene to a prim alcol depe samp coho cons main wom Rece addit treat may influ outc

#38. Kelly, J.F., Kahler, C.W. & Humphreys, K. (2010). Assessing why substance use disorder patients drop out from or refuse to attend 12-step mutual help groups: The "REASONS" questionnaire. *Addiction Research and Theory, 18,* (3). 316-325.	psycINFO keywords: Alcoholics Anonymous, self-help, groups, mutual-help, addiction, substance abuse. Funding by the Department of Veterans' Affairs Health Services Research and Development Department.	Qualitative Study Design. Level VI.	This study developed and tested a measure of reasons for non-participation and drop out from 12-step Mutual Help Groups.	Sample for this study was 60 male veterans entering VA substance Abuse Disorder treatment. 68 persons were invited to participate in a brief assessment interview (Eight individuals declined to participate). Criteria: meet an ICD-9 diagnosis for SUD and between ages of 18 and 65. Exclusion criteria: current suicidal or homicidal intent, organic impairment, or active psychotic symptoms.	"This measure could serve as a useful screening tool for barriers to 12-step participation and subsequently focus 12-step facilitation efforts or inform referral to non-12 step MHG's" (p. 316).	Limitations: the sample ifs relatively small and consisted of all male adult veterans. "There may be other reasons for non-attendance or drop out not captured in this measure.
#39. Hien, D.A., Jiang, H., Campbell, A.N.C., Hu, M., Cohen, L.R., Brigham, G.S., Capstick, C., Kulaga, A., Robinson, J., Suarez-Morales, L., & Nunes, E.V. (2010). Do treatment improvements in PTSD severity	Medline. Key words: substance use, RCT, PTSD, treatment. National Institute on Drug Abuse Grant.	Secondary analysis from RCT. Participants were randomly assigned to 12 sessions of either trauma-focused or health education treatment. Level two.	Objective: The purpose of the analysis was to examine the temporal course of improvement in symptoms of PTSD and substance use disorder among women in outpatient substance abuse treatment.	Sample size 353 women Criteria meeting DSM-I criteria for PTSD, substan abuse within t last 6 months a curre diagnos of drug alcohol abuse c depend ce. Age 18-65, proficie y in English. Exclusi criteria: significa	"This study developed and tested a measure of reasons for non-participation and drop out from 12-step Mutual Help Groups" (p. 316).		

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Weiss, R.D., Griffin, M.L., Kolodziel, M.E., Greenfield, S.F., Najavits, L.M., Daley, D.C., Doreau, H.R., & Hennen, J.A. (2007). A randomized trial of integrated group therapy versus group drug counseling for	psycINFO Key words: bipolar disorder, comorbidity, drug dependency, group counseling. Grants from the National Institute on Drug Abuse, and a grant from the Dr. Ralph and Marian C. Faulk Medical Research Trust.	Randomized controlled trial compar 20 weel of integrat group therapy or group drug counsel g with 3 months posttrea ment follow-u Level o evidenc Level II					

#33: Weiss, R.D., Griffin, M.L., Kolodziel, M.E., Greenfield, S.F., Najavits, L.M., Daley, D.C., Doreau, H.R., & Hennen, J.A. (2007). A randomized trial of integrated group therapy versus group drug counseling for	psycINFO Key words: bipolar disorder, comorbidity, drug dependency, group counseling. Grants from the National Institute on Drug Abuse, and a grant from the Dr. Ralph and Marian C. Faulk Medical Research Trust.	Randomized controlled trial compared 20 weeks of integrated group therapy or group drug counseling with 3 months of posttreatment follow-up. Level of evidence Level II.	Objective: Although bipolar disorder and substance use frequently co-occur, there is little information on the effectiveness of behavioral treatment for this population. "Integrated group therapy, which addresses the two disorders	Population persons with the diagnoses of both bipolar disease and substance use. Among 105 potential participants who met the initial criteria 62 were randomly assigned, 31 failed to complete the assessment process	Eligible patients were randomly assigned to integrated group therapy or group drug counseling. Groups began within 2 weeks of each other. Five cohorts of group treatment were conducted for each modality, with five	The primary outcome measure was the number of days of substance use. The primary mood outcome was the number of days ill with a mood episode. Intention to treat analysis revealed significantly fewer days of substance use for integrated	Conclusions: "Impaired group therapy, a new treatment developed specifically for patients with bipolar disorder and substance dependence, appears to be a promising approach to reduce substance use in this population" (p. 100).	Study strengths: Unusually high degree of data completeness and the use of manual based treatments and video taped sessions with ongoing supervision to ensure treatment quality and adherence. "Study limitations include	This is an interesting study because we have several patients attending our support groups who have both bipolar disease and substance use disorder.

Weiss, R.D., Griffin, M.L., Kolodziel, M.E., Greenfield, S.F., Najavits, L.M., Daley, D.C., Doreau, H.R., & Hennen, J.A. (2007). A randomized trial of integrated group therapy versus group drug counseling for	psycINFO Key words: bipolar disorder, comorbidity, drug dependency, group counseling. Grants from the National Institute on Drug Abuse, and a grant from the Dr. Ralph and Marian C. Faulk Medical Research Trust.	Randomized controlled trial compared 20 weeks of integrated group therapy or group drug counseling with 3 months of posttreatment follow-up. Level of evidence Level II.	Although bipolar disorder and substance use frequently co-occur, there is little information on the effectiveness of behavioral treatment for this population. "Integrated group therapy, which addresses the two disorders simultane	n persons with the diagnoses of both bipolar disease and substance use. Among 105 potential participants who met the initial criteria 62 were randomly assigned, 31 failed to complete the assessment process and 12 did	patients were randomly assigned to integrated group therapy or group drug counseling. Groups began within 2 weeks of each other. Five cohorts of group treatment were conducted for each modality, with five to eight	primary outcome measure was the number of days of substance use. The primary mood outcome was the number of days ill with a mood episode. Intention to treat analysis revealed significantly fewer days of substance use for integrated	ns: "Impaired group therapy, a new treatment developed specifically for patients with bipolar disorder and substance dependence, appears to be a promising approach to reduce substance use in this population" (p. 100).	strengths: Unusually high degree of data completeness and the use of manual based treatments and video taped sessions with ongoing supervision to ensure treatment quality and adherence. "Study limitations include	This is an interesting study because we have several patients attending our support groups who have both bipolar disease and substance use disorder.

#39. Blondell, R.d., Frydrych, L.M., Jaanimagi, M.S., Ashrafioun, M.A., Homish, G.G., Foschio, E.M., & Bashaw, B.A. (2011). A randomized trial of two behavioral interventions to improve outcomes	Pub Med database. Keywords: alcoholism, detoxification, interventions, therapeutics,	RCT Level II. The authors randomized 150 detoxification patients to receive treatmen	The purpose was to determine if the addition of a behavioral intervention during	150 study participants were recruited from patients who had been hospitalized for the	Participants were randomly assigned to either the TAU, MET or P-TSF	The primary outcome was the initiation of mutual self-help meeting attendance (i.e. at least	"We conclude that MET during detoxification may provide additional benefits	It is possible that sampling biases may limit the effects of these interventions. "The

following inpatient detoxification for alcohol dependence. *Journal of Addictive Diseases, 30,* (2). 136-148. doi: 10.1080/10550887.2011.554777	outcome assessment. Funding: Grant from the National Institute on Alcohol abuse and Alcoholism, and a grant from the University of Buffalo Interdisciplinary Research Fund.	t as usual (TAU), a Motivation Enhancement Therapy (MET) intervention or a Peer-delivered Twelve Step Facilitation (P-TSF) intervention.	alcohol detoxification would facilitate initiation of subsequent care.	medical management of alcohol withdrawal syndrome. Criteria for inclusion: at least 18 years of age, understanding of English, resided in the metropolitan area, had physician consent for study entry, and were able to give informed consent. Patients were excluded if they had previously refused to participate, or were homeless, enrolled in a methadone maintenance program, under the custody of law	groups and fidelity to the intervention was monitored by one of the members of the study team. Categorical variables were compared using the Fisher exact test. Means and SD's were calculated for continuous measures and comparisons were conducted using one way analysis of variance. "Overall event free survival (i.e. total abstinence	one meeting) or professional outpatient counseling (i.e. at least one session) or an admission to either an inpatient or a residential rehabilitation facility within 30 days of hospital discharge	in terms of initiating and maintaining patients in aftercare inpatient treatment programs" (p. 136). There were no significant differences for the rates of relapse to alcohol use (about 50%) or illicit drug use (about 25%) among the 3 groups at any follow-up interval.	major difference between these retrospective and prospective studies was sample selection. The retrospective studies evaluated all patients, whereas the prospective studies included only those who were willing and able to provide informed consent and excluded certain "high risk" sub-populations (e. g. homeless)" (p. 145). p. 145). . Also since the services provided by TAU are extensive, it

				enforcement, or unable to provide informed consent.	from alcohol and all drugs) was calculated according to the Kaplan-Meier method.			could be that the effects of any additional brief intervention may be negligible. Some patients who are receiving treatment for alcohol withdrawal demonstrate memory problems. "It may be that the interventions were effective but the study was underpowered to detect the effect given the large variance observed" (p. 145).

#40. Kuper, L.E., Gallop, R., & Greenfield, S.F. (2010). Changes in coping moderate substance abuse outcomes differentially across	Medline. Keywords: behavior therapy, coping behavior, drug abuse, drug rehabilitation, treatment outcomes. Funding support grants from the	Secondary data analytic study.	Aim as a secondary data analysis to examine changes in coping and outcomes among women receiving either WCG (Women's Recovery	Thirteen female participants were recruited for the pilot phase of the WRG study. "The pilot phase included 23 female participants who	Substance use was assessed at baseline, monthly during treatment (months 1-3) and post treatment	Ways of Coping was a self-report measure used.	In this secondary analysis, we found that while changes in coping did not differ significantly among women randomized to either single gender or mixed	The small sample size especially in the GDC group is a limitation. The results reinforce the importance of treating coping as a multidimensional construct.

behavioral treatment modality. *The American Journal on Addictions, 19,* 543-549	National Institute on Drug Abuse		Group) GDC (Group Drug Counseling). The aim was to assess whether changes in coping during treatment were associated with substance use outcomes and whether these potential relationships differed Based on treatment condition (WRG or GDC).	were randomized either to WRG (n=16) or GDC (n=7). Data from pre-pilot and pilot rounds of WRG were collected for the purpose of the study. Eligibility criteria: at least 18 years of age, meet criteria for current substance Dependence according to the DSM-IV, have used alcohol or drugs in the last 60 days and be available for follow-up. "Individuals with co-occurring bipolar, psychotic or PTSD were excluded.	(Months, 4-6 and 9) using the Timeline Follow-Back technique		gender SUD treatment, the relationship between changes in certain types of coping and treatment outcomes were dependent on treatment outcome" (p. 547). The correlation between Increases in problem-focused coping and increases in drinking days found in the CDC group were unexpected.	

Appendix B Logic Model

Project purpose is to examine an educational program's effectiveness in reducing stigmatizing attitudes of Healthcare professionals towards persons with substance abuse addictions.

Problem Identification
Substance abuse stigma is a significant barrier for assessing health care and substance abuse treatment services (2011). Substance abuse disorders are considered chronic, reoccurring diseases.

Inputs	Constraints	Activities	Outputs
1. DNP Student and Faculty Staff Time 2. RN students and RN's in the Nurse Residency program 3. Copies of pretests and posttests 4. Computer and audiovisual Equipment. 5. Classrooms and available time for presentation	1. Timeframe 2. Budget 3. Available Computer and physical space. 4. Willingness of students to participate. 5. Scheduling available for presentations at LCCC and CRMC	1. Project Plan for completion of Project. 2. Obtain IRB approval 3. Obtain letters of approval from LCCC and CRMC 4. Complete extensive literature review. 5. Obtain scheduling dates at 6. LCCC and CRMC. 7. Compile data and input data into SPSS.	1. Presentations at LCCC and CRMC for RN nursing students and RN's in the RN residency program. 2. Data obtained and analyzed. 3. Final capstone paper completed. 4. Capstone PowerPoin

s. 6. PowerPoint Presentation.			t completed and presented.

Outcomes

Short Term	Long Term	Impact
1. Increase in knowledge and empathy for persons with substance abuse addictions. 2. Exposure of RN's to concepts of stigma in Substance Abuse Addictions 3. Professional interactions with faculty and RN's during presentations.	1. Decrease and or elimination of stigma towards persons with substance use addictions. 2. Stimulate interest of RN's in psychiatric nursing. 4. Increase empathy, and quality of psychiatric nursing provided by the health care provides attending. 5. Encourage participants to become advocates of persons with substance abuse disorders in health care policy and government policy decisions. 6. Encourage formation of therapeutic relationships with patients of health care providers.	1. Deceased stigma towards persons with substance abuse addictions. 2. .Reduced rates of relapse in this population of substance use addictions and increased quality of life. 2. Transition and integration of this population back into the community. 3. Community education on substance abuse addictions and community involvement.

Appendix C Pretest/Posttest

Pretest and Post test

Please do not add any names or other personal identifying information on this quiz. Please circle your answers and choose only one answer for each question.

1. Persons with substance abuse disorders abuse the medical health care system.
   Strongly agree
   Agree
   Neutral
   Disagree
   Strongly Disagree

2. Persons with substance abuse disorders have personal control over his/her addiction behaviors.
   Strongly agree
   Agree
   Neutral
   Disagree
   Strongly Disagree

3. Substance abusers are weak-willed and lack self-control.
   Strongly agree
   Agree
   Neutral
   Disagree
   Strongly Disagree

4. Substance abusers are to blame for their difficulties and should accept personal responsibility.
   Strongly agree
   Agree,
   Neutral
   Disagree
   Strongly Disagree

5. I would prefer not to have a person addicted to substance abuse as my neighbor.
   Strongly agree
   Agree
   Neutral

Disagree
Strongly Disagree

6. The main purpose of mental hospitals should be to protect the public from persons with substance abuse or other mental health problems.
Strongly agree
Agree
Neutral
Disagree
Strongly Disagree

7. Most employers will hire someone who has been treated for substance abuse addiction is he/she is qualified for the position.
Strongly agree
Agree
Neutral,
Disagree
Strongly Disagree

8. I would be willing to have someone as a close friend who has been treated for substance abuse.
Strongly agree
Agree
Neutral,
Disagree
Strongly Disagree

9. Persons with substance abuse are generally not responsible citizens.
Strongly agree
Agree
Neutral
Disagree,
Strongly Disagree

10. Patients with substance abuse disorders are more likely to be aggressive than patients with other medical diagnoses.
Strongly agree
Agree
Neutral
Disagree
Strongly Disagree

Appendix D CITI Training

CITI Collaborative Institutional Training Initiative (CITI)

CITI Conflicts of Interest Curriculum Completion Report
Printed on 9/28/2012
Learner: Shirley Patrick (username: spatrickregis)
Institution: Regis University
Contact Information PO Box 21254
Cheyenne, Wyoming 82003 United States
Department: DNP
Email: cheyenneshirleysue@yahoo.com

Conflicts of Interest:

Stage 1. Stage 1 Passed on 09/28/12 (Ref # 8867784)

Required Modules	Date Completed	
CITI Conflict of Interest Course - Introduction	09/28/12	no quiz
Financial Conflicts of Interest: Overview, Investigator Responsibilities, and COI Rules	09/28/12	10/10 (100%)
Institutional Responsibilities as They Affect Investigators	09/28/12	4/5 (80%)

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Course Coordinator

CITI Collaborative Institutional Training Initiative (CITI)

The RCR for Social & Behavioral Curriculum Completion Report
Printed on 9/28/2012

Learner: Shirley Patrick (username: spatrickregis)
Institution: Regis University
Contact Information PO Box 21254
Cheyenne, Wyoming 82003 United States
Department: DNP
Email: cheyenneshirleysue@yahoo.com

The RCR for Social & Behavioral: This course is for investigators, staff and students with an interest or focus in **Social and Behavioral** research. This course contains text, embedded case studies AND quizzes.

Stage 1. RCR Passed on 09/28/12 (Ref # 8867783)

Required Modules	**Date Completed**	
Introduction to the Responsible Conduct of Research	09/28/12	no quiz
Research Misconduct 2-1495	09/28/12	4/5 (80%)
Case Study - Truth or Consequences 2-1217	09/28/12	3/3 (100%)
Case Study - In the Field, No One Will Know 2-1218	09/28/12	3/3 (100%)
Case Study Plagiarism 2-1472	09/28/12	2/2 (100%)
Human Subjects 13566	09/28/12	5/5 (100%)

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Course Coordinator

Return

Learner: Shirley Patrick (username: spatrickregis)

CITI Collaborative Institutional Training Initiative

Appendix E Regis IRB Approval

Dear Ms. Patrick…

The Institutional Review Board has completed a thorough evaluation of your submitted proposal, *Substance Abuse Addictions and Stigma.* I am pleased to inform you that your resubmitted proposal has been approved as an Exempt study per Category # 2. You may begin study implementation and data collection upon receipt of this email. An official letter of approval for your study files will be forthcoming. We truly wish you success with your investigation!

Patsy McGuire Cullen, PhD, PNP-BC

Chair, Institutional Review Board

irb@regis.edu

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Institutional Review Board, Regis University
Main Hall, Room 452, Mail Code H4
Denver, CO 80221
Email: irb@regis.edu

Re: Shirley S. Patrick, RN, MS, Doctoral Research

September 26, 2013

To whom it may concern:

As the Chief Compliance and Privacy Officer this letter is to serve as notice that Cheyenn
Medical Center supports the educational program by Shirley S. Patrick, RN, MS, and entit
Abuse Addictions and Stigma". Cheyenne Regional is pleased to support Ms. Patrick in he
endeavors.

For this project, Cheyenne Regional understands that Ms. Patrick will be providing educa
clinical staff on Cheyenne Regional's Behavioral Health Unit. The staff will take a pre-tes
test. We anticipate that if the scope of the project is to change that Ms. Patrick will notif
Regional in advance of the change to determine if additional institutional safe guards ne
followed.

If you have any additional questions or concerns, please me at (307) 432-6624 or
aimee.dendrinos@crmcwy.org.

Thank you,

Appendix G LCCC Approval Letter

LARAMIE COUNTY
COMMUNITY COLLEGE

October 18, 2013

Shirley Patrick
507 Sierra Drive
Cheyenne, WY 82003

Dear Shirley—

It is so exciting to hear that you are almost through your DNP program. Congratulations! We would be happy to have you come present your PowerPoint on "Substance Abuse and Stigma" to students. I understand that the participants will need to complete the pre and post tests and sign a consent. We don't have class time to show this, but can arrange for a room, technology for your presentation and ask for student and faculty volunteers. I think you should have a fairly good turnout for your presentation.

Thank you for the offer and I look forward to your presentation.

Sincerely,

Jennifer A. Anderson, MS, RN
Director, Nursing Program

Appendix H Paired Samples Test Paired Differences

Paired Samples Test

		Paired Differences				
					95% Confidence Interval of the Difference	
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper
Pair 1	PreTest Abuse the Medical Health System - Post Test Abuse the Medical Health System	.24444	1.04785	.15620	-.07036	.55
Pair 2	Pre Test Personal Control of Addiction Behaviors - Post Test Personal Control of Addiction Behaviors	.04444	.82450	.12291	-.20326	.29
Pair 3	Pre Test Weak-willed and lack self-control - Post Test Weak-willed and lack self-control	.00000	.63960	.09535	-.19216	.19
Pair 4	Pre Test Blame and personal responsibility - Post Test Blame and personal responsibility	.22222	1.20395	.17947	-.13948	.58
Pair 5	Pre Test Addiction person as neighbor - Post Test Addiction person as neighbor	.06667	.83666	.12472	-.18469	.31
Pair 6	Pre Test Purpose to protect public from persons with addictions - Post Test Purpose to protect public from persons with addictions	-.11111	.77525	.11557	-.34402	.12
Pair 7	Pre Test Employers hiring persons with addictions - Post Test Employers hiring persons with addictions	.28889	.66134	.09859	.09020	.48
Pair 8	Pre Test Close friend of person with addictions - Post Test Close friend of person with addiction	.31111	.66818	.09961	.11037	.51

Pair 9	Pre Test Generally not responsible citizens - Post Test Generally not responsible citizens	-.28889	.92004	.13715	-.56530	-.01
Pair 10	Pre Test More likely to be aggressive - Post Test More likely to be aggressive	-.17778	.80591	.12014	-.41990	.06

SPSS Computer Printout

Appendix I Paired Samples Correlations

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	PreTest Abuse the Medical Health System & Post Test Abuse the Medical Health System	45	.546	.000
Pair 2	Pre Test Personal Control of Addiction Behaviors & Post Test Personal Control of Addiction Behaviors	45	.628	.000
Pair 3	Pre Test Weak-willed and lack self-control & Post Test Weak- willed and lack self-control	45	.754	.000
Pair 4	Pre Test Blame and personal responsibility & Post Test Blame and personal responsibility	45	.288	.055
Pair 5	Pre Test Addiction person as neighbor & Post Test Addiction person as neighbor	45	.636	.000
Pair 6	Pre Test Purpose to protect public from persons with addictions & Post Test Purpose to protect public from persons with addictions	45	.605	.000
Pair 7	Pre Test Employers hiring persons with addictions & Post Test Employers hiring persons with addictions	45	.721	.000
Pair 8	Pre Test Close friend of person with addictions & Post Test Close friend of person with addiction	45	.649	.000

Pair 9	Pre Test Generally not responsible citizens & Post Test Generally not responsible citizens	45	.457	.002
Pair 10	Pre Test More likely to be aggressive & Post Test More likely to be aggressive	45	.676	.000