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Exploring and Comparing Anxiety Levels on Patients Admitted Twice to a Detox Unit with a Primary Diagnosis of Alcohol Dependence and Withdrawal: A Pilot Study

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Abstract

Objective: Severe alcohol usage is detrimental to one's health and has led to numerous deaths in the United States. It has been clearly established in studies that individuals have utilized alcohol to self-medicate in an attempt to minimize their anxiety, stress, emotional instability and depression in their lives. The objective of this study was to explore anxiety levels and compare the patient's anxiety upon two admissions and two discharges, to observe any triggers that may have contributed to a relapse of alcoholism among patients with a primary diagnosis of alcohol dependence and withdrawal.

Methods: A retrospective chart review of 20 randomly selected charts was audited from September 2014 to August 1, 2016 from a small, private detox unit in Texas. Charts were reviewed for the following data: age, gender, number of admissions, discharges, their primary, secondary diagnosis, and their Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-Ar) levels on two admission and discharges.

Results: Patients who were admitted on second admission with higher anxiety than the prior admission had a tentative decrease in anxiety between the second admission and discharge then the previous one. There was a tentatively significant decrease of anxiety on the second admission and second discharge. Perhaps the patient was learning how to manage their anxiety with each admission and discharge.

Conclusion: Alcohol dependence is a multi-faceted problem that can contribute to numerous health disparities. This pilot study suggested that it was essential, prior to discharge, patients must understand how to identify their origin of their anxiety and how to manage their anxiety during each admission and discharge.

Keywords: Anxiety; Alcohol dependence; Alcohol withdrawal; Ciwa-Ar; Psychoactive substance; Recidivism

Introduction

Alcohol abuse is a multi-faceted, ever-increasing problem associated with many issues in the United States. According to the World Health Organization, "Alcohol is a psychoactive substance with dependence-producing properties that has been widely used in many cultures for centuries" [1]. The harmful use of alcohol causes disease, as well as, social and economic burden in our society.

Individuals have reported using alcohol as a means to self-medicate in order to minimize feelings of anxiety. Some individuals reach a point where they become dependent on alcohol and it begins to interfere with their job, family life, and/or physical and mental health. When alcohol intake begins to be recognized by the individual or their family as a problem, the drinker may try to stop or decrease their alcohol intake which can lead to withdrawal. Symptoms of withdrawals include insomnia, tremulousness, gastrointestinal upset, diaphoresis, palpitations and increased anxiety [1].

According to Csaba et al.'s, anxiety has been proposed to play a significant role in the initiation, maintenance and relapse components of alcohol use disorders (p. 434) [2]. With increased anxiety levels, as well as other withdrawal symptoms, it can become difficult for individuals to remain sober, causing them to seek assistance in one of the many alcohol detoxification centers throughout the country.

The problem was that patients who complete an alcohol detoxification program without addressing the underlying cause of anxiety often relapse and return to alcohol to help them cope. This project will explore anxiety and recidivism among patients with a primary diagnosis of alcohol dependence and withdrawal. The Revised Clinical Institute Withdrawal Assessment Scale for Alcohol (CIWA-Ar, 1989) (Appendix 1 for CIWA scale) will be used to examine anxiety at the time of admission and time of discharge [3]. The goal of this project was to explore anxiety levels on admission and discharge among those patients with high rates of recidivism and a primary diagnosis of alcohol dependence and withdrawal.

The Center for Disease Control reports that there are 88,000 deaths each year due to alcohol use [4]. As the third leading cause of death in the United States, alcohol use contributes too many societal issues such

as homelessness and illegal activity, in addition to mental health related issues such as depression and anxiety. There are many negative health outcomes of alcoholism including cirrhosis of the liver, esophageal varices, hypertension and breast cancer. Excessive alcohol consumption in the United States has an estimate cost of 223.5 billion dollars in 2014, the majority of this cost resulted from workplace productivity of which was attributed to the total amount of loss from the workplace, an increase of health care expenses, law enforcement and legal issues increase from motor vehicle costs [4].

The overall goal of detox was to facilitate the removal of substances from the body while treating withdrawal symptoms safely. According to The American Society of Addiction Medicine (2015), to support a change in a patient's life, four aspects must be met to detox patients off substances and to lead them to the road to recovery: Maintaining a secure home, having a purpose in life and maintaining a sense of community with relationships and social networks was essential to feel secure and continue to the road to recovery [5].

Maintaining emotional stability is imperative in maintaining sobriety, examining triggers that generate negative emotions must be addressed. This project was a retrospective chart review focused on anxiety levels upon admission and discharge, and recidivism back to the detox unit. Exploring anxiety and recidivism could potentially assist in identifying a need for additional interventions to address anxiety among individuals with a primary diagnosis of alcohol dependence and withdrawal.

An explorative retrospective chart review pilot study was conducted to explore admission and discharge anxiety levels among patients with high rates of recidivism of who have a primary diagnosis of alcohol dependence and withdrawal. Recidivism for this project was defined as those patients admitted and discharged to the detox facility at least 2 times. The study included both male and female patient charts that meet the project inclusion criteria. It was important to assess anxiety in this population because it plays a significant part in triggering a relapse in alcohol dependence [2].

The study was done at a small, privately funded for profit facility in a county in Texas. This facility serves privately funded insured patients and private pay patients suffering from substance abuse. The study used a retrospective chart review of 20 randomly selected charts from September 2014 to August 1, 2016. The small sample of 20 was due to the treatment center being quite new, and primarily admits private pay and privately insured patients.

Paired Sample Statistics			
	Mean	**Standard Deviation**	**Standard Error of the Mean**
Admission 1	4.85	4.295	0.96
Discharge 1	2.85	3.602	0.805
Admission 2	6.2	6.526	1.459
Discharge 2	1.85	2.159	0.483

Table 1: Anxiety scores at admissions and discharges.

Charts were reviewed for collection of the following data: primary and secondary diagnosis, date of admission, number of admissions within this time frame, age, and anxiety levels as reported on the Clinical Institute Withdrawal Assessment of Alcohol, Revised (CIWA-Ar) [3]. This CIWA-Ar was utilized in the facility to assess anxiety at the time of admission and discharge. The data collected (Table 1), was evaluated and summarized to explore the last 2 admission and discharge anxiety levels of 20 patients and assessing the total number of times they had been re-admitted.

The data collected last 2 admission which would be labeled a pre-test and discharge which will be called a post-test. CIWA-Ar anxiety levels, was to be evaluated and summarized to explore any patterns or changes in regard to anxiety levels. Statistics were used to measure the correlation between the categorical and continuous variables. The paired t-test was utilized to compare the two population means for the CIWA-Ar pre-test and CIWA-Ar post-test on two admission and discharges.

Materials and Method

Participants

The data collected for this project was a retrospective chart audit of n=20 patients that were randomly selected from September 1, 2014-August 20, 2016. Inclusion criteria included age, number of admissions and discharges. The ages of participants ranged from 19 to 58 with a mean of 31.9 and a median of 26.5. The pilot sample included 15 males and five females. Ethnicity was not taken into account.

To measure anxiety of the patient, a CIWA-Ar was utilized upon admission and at discharge at first and second visit, on patients with a primary diagnosis of alcohol dependence and withdrawal. To protect patient privacy, patient demographics were removed and de-identified and were assigned a number of 001, 002, etc.

To assess anxiety the revised Clinical Institute Withdrawal Assessment for Alcohol (CIWA-Ar) scale was utilized. The CIWA-Ar is a validated 10 item assessment tool used to quantify the severity of alcohol withdrawal syndrome, and to monitor and medicate patients going through withdrawal. Anxiety was assessed by asking the patient to rate their anxiety scale of 0-7 on admission and at discharge [6]. The CIWA-Ar is considered the gold standard for alcohol withdrawal, it is comprehensive, simple, and can be done quickly. In the clinical setting, in most cases this tool can be completed in two minutes.

When the CIWA-Ar numbers are added, the medical provider can determine what types of interventions are needed for the patient experiencing anxiety. According to CIWA-Ar scale, under the category anxiety a patient is score either a 0- for none, at ease; 1- mildly anxious; 4- moderately anxious or guarded; 7- equivalent to acute panic state. A total CIWA-AR score of 8 or higher indicates prn medications only, a total score 0f 15 or higher indicates a scheduled medication in addition to a prn medication or intervention. A total CIWA-Ar score of 35 or higher requires re-assement every 1 h × 8 h and 4 mg/h. of Lorazepam × 3 h or 20 mg/h. of diazepam × 3 h required. Also consider transferring this patient to the hospital/ICU [6].

Procedures

The data was collected by the Principal Investigator for analysis and gathered from March 1, 2016-August 20, 2016. This data was entered into the IBM SPSS Statistics Version 24 and analyzed.

Results

In this pilot study patient 'the mean anxiety scores of patients were calculated at each admission and each discharge. Table 1 illustrates the distributions of anxiety scores for each admission and discharge. Figure 1 illustrates the changes over time in anxiety scores. Figure 1 plots the mean anxiety scores across time with standard error bars around each point and the overall trend line from admission 1 to discharge 2. As can be seen, in the Appendix of this study. Patients' anxiety scores tentatively decreased from each admission to each discharge. However, patients entered the second admission with higher anxiety than at first admission. Patients' anxiety scores tentatively decreased much more dramatically between the second admission and discharge than between the first admission and discharge.

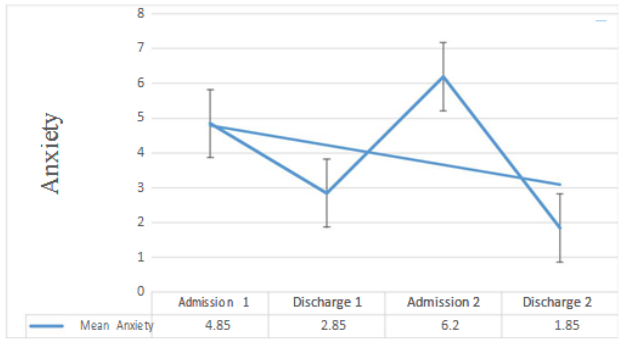

Figure 1: Mean anxiety over time.

To test whether patients' anxiety scores decreased significantly from admission to discharge, two pairwise t-tests were conducted. Initial correlations between admissions and discharge indicated no significant correlations. Table 2 illustrates the results of the two pairwise t-tests of differences between admission and discharge. As can be seen, in the Appendix of this study. Only the difference between the second admission and second discharge were meaningful [t (19)=2.993, p=0.007].

Pairwise t-tests of Differences		Mean Difference	Standard Error of the Mean Differences	t	df	p
Pair 1	Admission 1-Discharge 1	2	1.212	1.65	19	0.115
Pair 2	Admission 2-Discharge 2	4.35	1.453	2.993	19	0.007

Table 2: Results of the two pairwise t-tests of differences between admission and discharge.

Exploratory correlations were conducted between the anxiety scores and the demographics of age and gender. Pearson Product Moment correlations were calculated to estimate the relationships among the continuous variables of age and anxiety. Point Bi-serial correlations were calculated to estimate the relationship between the categorical variable of gender and the continuous variables of anxiety. Table 3 illustrates that none of the correlations were significant.

		Admission 1	Discharge 1	Admission 2	Discharge 2
Age	Pearson Correlation	-0.135	0.217	0.419	0.4
	p	0.57	0.359	0.066	0.08
	N	20	20	20	20
Gender	Point Bi-serial Correlation	0.434	0.058	-0.091	-0.123
	p	0.056	0.81	0.704	0.604
	N	20	20	20	20

Table 3: Correlations.

Discussion

The goal of this project was to explore anxiety levels and compare anxiety levels across two admissions of patients who have a diagnosis of alcohol dependence and withdrawal. With a small sample of 20 patients, the findings indicated anxiety scores of detox patients' decreased from each admission to each discharge. Nevertheless, those who were admitted on second admission with higher anxiety then the prior admission, their anxiety scores decreased between the second admission and discharge then the prior admission and discharge. The only differences identified were between the second admissions and second discharge which was noteworthy. In this pilot study, it was believed that patients are learning to understand and manage their anxiety with each admission and discharge.

According to Csaba et al, anxiety plays a significant part in triggering a relapse in alcohol dependence [2]. Anxiety can disable and "decrease the quality of life" and understanding what triggers anxiety was important to learn to manage anxiety and utilize future interventions to help overcome anxiety. Overcoming this anxiety may help prevent a relapse of alcoholism and re-admission back to the detox unit [7]. In regards to age and gender, there was no correlation between anxiety score related to age and gender, and no correlations regarding these demographics.

According to Anker et al., it was interesting to note that individuals who have been diagnosed with a co-existing anxiety disorder had a higher rate of relapse then patients who did have a diagnosis of any anxiety disorder [8]. Remarkably, 5 males and 1 female in this study were diagnosed with Generalized Anxiety Disorder, as diagnosed by the psychiatrist on premise at the treatment Center. The other 14 patients were diagnosed with other mental health illnesses such as Major Depression, PTSD, Amphetamine dependence and opioid dependence and withdrawal.

Limitation

There were a few limitations observed in this project, one limitation was the small sample that was obtained from the detox unit. The inception of this detox unit was October 20, 2014 and had a small number of privately insured patients, and private pay patients. A limitation had to exclude patients that had two primary diagnosis of alcohol dependence and withdrawal, since the, CIWA-Ar tool was not utilized, these patients did not test positive for alcohol, however, tested positive for another substance. Consequently, other evaluation tools were utilized to measure these substances respectively.

Conclusion

Alcohol dependence is a multi-faceted problem that can contribute to numerous health disparities, financial and social concerns. The findings of this project on patients anxiety levels were compared across two admission and discharges with patients with a primary diagnosis of alcohol dependence will provide relevant information to help inform practice and improve health outcomes on patients with alcohol dependence This project would also add new information to existing literature on anxiety and alcohol addiction. Upon extensive literature review, it was identified that there were many studies conducted on long term in house detox units, however, there were minimal studies on short term 7 day detox units. This project investigated first-hand information on an acute care detox unit that may be the impetus for developing change in clinical practice.

This study finding will lead to future studies that will educate the advanced practice nurse on the importance that the patient may understand the inception of their anxiety and to learn how to manage it by interviewing and observing the patient for signs and symptoms of anxiety. The Advanced Practice Nurse or other health care professionals must educate patients that in addition to 7 day detox, a patient may require a longer treatment such as an in house treatment center and long-term counselling to help manage anxiety, possible mental health issues and alcohol relapse [9].

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