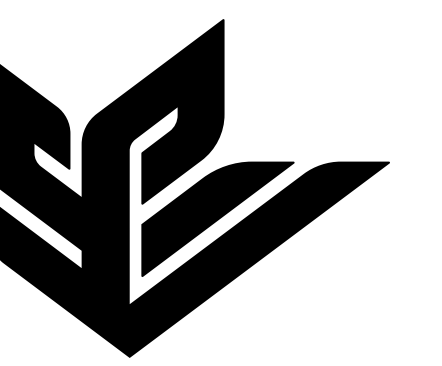


The efficacy of virtual and in-person treatment of substance use, and mediating effects of social connection



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ABSTRACT

Telehealth increases accessibility of treatment for SUD patients who need the social connection but do not have access to a treatment facility due to financial, geographical or other limitations. However, empirical evidence is needed to validate the efficacy of virtual SUD treatment as well as explore the mediation effects of social connection. We hope to carry out a quantitative longitudinal cohort study by looking at treatment outcomes between two groups of adults randomly assigned to in-person or virtual SUD treatment. We will then reassess the occurrence of drug use to understand any longitudinal differences and mediation effect of social connection.

INTRODUCTION

- Virtual Substance Use Disorder (SUD) treatment is not a widely available service nor has it been adequately studied in research.
- According to SAMSA, in 2017, more than 17.6 million adults over the age of 18 were diagnosed with SUD and needing but not receiving treatment at a specialty facility.
- During certain events like pandemics or natural disasters, there is a possibility for forced social isolation, and a lack of ability to receive in-person treatment.
- Research remains consistent, that social connectivity is a key pillar for the onset and solution of drug addiction. (Bruce, A., K., 1982)
- This research begs the question that if drug addiction treatment is done through virtual means, does there still exist some or all of the problem of social isolation, critical to the solution and treatment of drug addiction.

PRIMARY AIM AND HYPOTHESES

- RQ1: Is virtual SUD group therapy treatment efficacious compared to traditional in-person group therapy treatment?
- H1: The higher success rate for the treatment of drug addiction immediately following treatment will be with the in-person group.
- RQ2: Are there differences in outcomes between groups when considering long term continued sobriety?
- H2: The higher success rate for the treatment of drug addiction over the course of three months, six months, and one year will be with the in-person group.
- RQ3: Is any of the variance in treatment outcomes between groups mediated by social connection?
- H3: In-person social connection will be one mediator that significantly informs these differences in outcomes.

METHODS

Participants

- Two co-ed groups of 35 adults between the ages of 18 and 65 diagnosed with moderate or severe substance use disorder
- Recruited from outpatient substance use treatment centers in the State of Washington
- Participant engagement is entirely voluntary and will not be mandated by the researchers or by court

Procedures

- Two groups of participants will be randomly selected from either in-person or on-line out-patient eight-week drug and alcohol therapy
- All participants will be assessed using the DSM-5 SUD diagnostic criteria in the beginning of treatment
- Responses to surveys completed by participants were collected online or in-person. The data were collected immediately following treatment (T1) and at follow-up 3 months later (T2), six months later (T3), one year later (T4)

MEASURES

Moderate or Severe substance use disorder

- Severity of participant's SUD was measured by twelve item DSM-5 diagnostic criteria

Social connection

- Social connection was measured by the four item modified version of Connectedness Measure (Reed et. al., 2016) at T1, T2, T3 and T4.
- The total scores of the four items at T1, T2, T3 and T4 reflects participants' level of social connectedness at those time points.

Group therapy treatment efficacy

- Group therapy treatment efficacy was measured by the reoccurrence of drug use at T1, T2, T3 and T4. A survey created for this research was used to measure the number of times participants have used drug or alcohol post treatment.
- For participants who have not used drug or alcohol at T1/T2/T3/T4, they will be assigned numeric value 0
- For participants who have used drug or alcohol between 1 to 2 times at T1/T2/T3/T4, they will be assigned numeric value 1.
- For participants who have used drug or alcohol between 3 to 5 times at T1/T2/T3/T4, they will be assigned numeric value 2.
- For participants who have used drug or alcohol between 6 to 10 times at T1/T2/T3/T4, they will be assigned numeric value 3.
- For participants who have used drug or alcohol more than 10 times at T1/T2/T3/T4, they will be assigned numeric value 4.
- The mean scores at T1, T2, T3 and T4 reflects participants' frequency of drug or alcohol use at those time points. The lower the score, the higher the treatment efficacy

RESULTS

Hypothesis 1:

Means of drug use reoccurrence for the two groups at T1 will be calculated. The lower the mean, the less times the participants have used drug and alcohol, the higher the success rate immediately after treatment. T-test will be used to determine if there is a significant difference between the means of the two groups.

Hypothesis 2:

Means of drug use reoccurrence for the two groups at T2, T3 and T4 will be calculated. The lower the mean, the less times the participants have used drug and alcohol, the higher the success rate 3 months, 6 months and 1 year after treatment. T-test will be used to determine if there is a significant difference between the means of the two groups.

Hypothesis 3:

The mean of total score of Connectedness Measure in the two groups will be used in a mediation analysis to determine if there is an indirect effect social connection has between treatment and treatment success rate in each group. Indirect effect will be tested with 5000 bootstraps.

Discussion

- This research direction hoped to expand current research that demonstrated the efficacy of drug use treatment, and current drug treatment paradigms. Current research seems to indicate that an integral quality of drug addiction is an individual's ability to be socially connected. Additionally, there is more research that must be done in terms of determining whether or not in-person treatment is more effective/efficacious in treating drug use disorder than treatment that is held virtually. This research specifically hoped to develop an argument around a key moderating variable, that those who undergo virtual treatment are receiving potentially less social connection in their treatment process, and therefore their treatment outcomes will reflect poorly against those of the in-person treatment group. Essentially, this research sought to determine if those who underwent in-person treatment maintained better long-term sobriety as opposed to those who received virtual treatment because of the differences and deficits in social connection.
- Future research should direct itself toward this social connection paradigm when considering drug use prevention and treatment. Models of treatment are often being compared for the sake of determining treatment quality and efficacy. This is a worthy endeavor, however it may be neglecting social implications. Establishing a person's connection to healthy and supportive community may become the new first. This research direction, of course, will target the marginalized within society; the ones who do not have equal access to community resources, and the ones who are often ostracized.