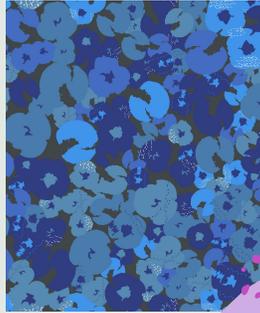


Medication-Assisted Treatment vs. 12-Step Group Therapy: A Comparative Analysis of Treatment Adherence and Abstinence in Patients with Opioid Use Disorder

IntNSA Presentation
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Disclosure Statement

I have no financial relationship with any commercial interest related to the content of this presentation

I will not be discussing off-label use during this presentation

Overview

Introduction

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Results

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Future Direction

My Why



Introduction

2.1 million people in the US over the age of 12 have OUD.

20% of OUD patients have misused a prescription opioid at least once in their lifetime.

50% of industrialized countries report three months of adherence to OUD treatment.

(Cicero et al., 2015; Compton et al., 2016; Kern et al., 2020; Mattson et al., 2017).



Empirical studies indicate most OUD patients need at least three months of adherence to treatment to significantly reduce or stop opioid use.

(Abdollahi & Haghayegh, 2020; Akhosh et al., 2016; Humphreys et al., 2020; Mendola et al., 2016; Volkow, 2020).



Does My Patient Have an Opioid Use Disorder?

- ✓ ***Tolerance**
- ✓ ***Withdrawal**
- ✓ **Use in larger amounts or duration than intended**
- ✓ **Persistent desire to cut down**
- ✓ **Giving up interests to use opioids**
- ✓ **Great deal of time spent obtaining, using, or recovering from opioids**

*This criterion is not considered to be met for those individuals taking opioids solely under appropriate medical supervision

DSM-5



Mild OUD: ≥3 Criteria
 Moderate OUD: 4-5 Criteria
 Severe OUD: ≥6 Criteria

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*

Definitions

MAT: Three FDA-approved OUD medications methadone, buprenorphine, and naltrexone, in combination with counseling and behavior therapies that prevent opioid relapses a wholistic approach to stabilize and maintain treatment (Carroll & Weiss, 2017; Humphreys et al., 2018; Kim et al., 2015; Korthuis et al., 2017; Levin et al., 2016; McElrath, 2018).

Adherence: Continued participation in OUD treatment and no withdrawal symptoms experienced for a period of three months (Marsden et al., 2019).

Non-adherence: A positive blood test or urine toxicology test result for illicit opioids within a period of three months (Marsden et al., 2019).

Treatment Programs

Medication Assisted Treatment (MAT)

12-Step Group Therapy

Statement of the Problem

- Less than 50% of adult patients adhere to MAT or 12-step group therapy three months after initial enrollment (Harvey et al., 2020; Kern et al., 2020; Proctor et al., 2017; Sabaté & Sabaté, 2003).
- Limited evidence exists on how demographic, socioeconomic, behavioral, and psychological variables predict treatment adherence and illicit opioid abstinence of adult OUD patients that are enrolled in MAT or in 12-step group therapy (Gustafson et al., 2016; Han et al., 2017; Jones et al., 2015; Kumari et al., 2016; Levin et al., 2016; Rieckmann et al., 2016; Sabaté & Sabaté, 2003).

Significance to Nursing

- More urgent than ever: Opioid epidemic has caused 700,000 deaths and led 2.1 million people to misuse prescription opioids in the U.S (WHO, 2019).
- FDA-approved MAT and 12-step group therapy for OUD are effective at increasing treatment adherence and abstinence from illicit opioids.
- Treatment dropout rates and the relapse to illicit opioid use after treatment initiation remains high (Bose et al., 2018; Han et al., 2017; Lilly, 2018; Volkow et al., 2019).

Gaps in the Research

- Areas that have received limited attention:
- RCT and longitudinal studies.
 - Predictors of adherence and abstinence.
 - Perception of OUD patients as it relates to adherence and abstinence.

Aim 2

- To compare treatment adherence and illicit opioid abstinence of adult OUD patients enrolled in MAT to the treatment adherence and illicit opioid abstinence of adult patients enrolled in 12-step group therapy after controlling for age, marital status, and gender.
- **Hypothesis 1:** Treatment adherence and illicit opioid abstinence of adult OUD patients are not different between those enrolled in MAT to those enrolled in 12-step group therapy after controlling for age, marital status, and gender.

METHODS

Population



Adults who meet DSM-V Dx of OUD and lived in Florida

Sample

Individuals who actively received treatment at an outpatient treatment center located in the southeast region of Florida.



Inclusion and Exclusion Criteria

Inclusion Criteria

- Age > 18 years old
- DSM-V Dx of OUD
- Enrolled in MAT or 12-step group therapy for at least six months

Exclusion Criteria

- Age < 18 years old
- Individuals with major mental disorders or illnesses documented by DSM-V (e.g., Schizophrenia, Catatonia, Psychosis, or dissociative disorders).

IRB

<p>UNIVERSITY OF SOUTH FLORIDA INSTITUTIONAL REVIEW BOARD</p> <p>October 5, 2021</p> <p>Deirdra O'Leary 161 NW 20th Avenue Pueblo de Palm, FL 33629</p> <p>Dear Dr. Deirdra O'Leary:</p> <p>On 10/5/2021, the IRB reviewed and approved the following protocol:</p> <table border="1"> <tr><td>Applicant:</td><td>Deirdra O'Leary</td></tr> <tr><td>IRB ID:</td><td>191301001211</td></tr> <tr><td>Project Title:</td><td>12-Step Group Therapy: A Comparative Analysis of Treatment Adherence and Abstinence in Patients with Opioid Use Disorder</td></tr> <tr><td>Site:</td><td>Outpatient</td></tr> <tr><td>Principal Investigator:</td><td>Deirdra O'Leary, MD, PhD</td></tr> <tr><td>Project Location:</td><td>161 NW 20th Avenue, Pueblo de Palm, FL 33629</td></tr> </table> <p>The IRB determined that the protocol meets the criteria for exemption from IRB review.</p>	Applicant:	Deirdra O'Leary	IRB ID:	191301001211	Project Title:	12-Step Group Therapy: A Comparative Analysis of Treatment Adherence and Abstinence in Patients with Opioid Use Disorder	Site:	Outpatient	Principal Investigator:	Deirdra O'Leary, MD, PhD	Project Location:	161 NW 20th Avenue, Pueblo de Palm, FL 33629	<p>Memorial Healthcare System INSTITUTIONAL REVIEW BOARD</p> <p>300 Johnson Street, Hollywood, FL 33021 Phone: 954.261.1817 E-mail: irb@memh.com www.memh.com 1-888-MyMemorial</p> <p>October 25, 2021</p> <p>Andrew Pignatelli, MD 3020 N. 29th Ave. Hollywood, FL 33021</p> <p>Re: Request: 1001-2021-126</p> <p>Project Title: MAT vs 12-Step Group Therapy: A Comparative Analysis of Treatment Adherence and Abstinence in Patients with Opioid Use Disorder</p> <p>Submission Type: Human Subjects Research Application – Initial Review (IRB175)</p> <p>Dear Investigator:</p> <p>The Memorial Healthcare System Institutional Review Board (IRB) has reviewed the proposed activity referenced above and determined that it meets the requirements for IRB oversight as outlined in 45 CFR 46.101 or</p>
Applicant:	Deirdra O'Leary												
IRB ID:	191301001211												
Project Title:	12-Step Group Therapy: A Comparative Analysis of Treatment Adherence and Abstinence in Patients with Opioid Use Disorder												
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Data Acquisition

- IT department of the study site provided access to EMR based on the study inclusion and exclusion criteria.
- Data was extracted from patients' EMRs by the IT department.
- Data was shared with PI via a password-protected Excel sheet.
- Data was then imported into SPSS 27® and coded for analysis.

Operational Definitions

- **Adherence:** Participants were positive for FDA-approved MAT buprenorphine and other substances that were prescribed. If OUD patients tested positive for marijuana (THC) they were still considered adherent (Memorial Behavior Clinical Site Protocol).
- **Non-adherence:** Considered non-adherent if 14-panel urine drug screen was positive for opioid or cocaine or medication not prescribed in the 14-panel urine drug screen at three and six months after initiation of treatment (Memorial Behavior Clinical Site Protocol).

Measures

- Demographic data tool—age, marital status, gender, and race.
 - > Collected retrospectively from EMR
- Treatment adherence and illicit opioid abstinence by both groups MAT & 12-step group therapy
 - > Point of Care Marketplace Urine Drug Screen™
 - > Urine sample from the participants to detect up to 14 drugs located in EMR



Analysis Plan

- Univariate and bivariate analysis of demographic variables was performed to describe variables
- **AIM 1: Chi-square test**
 - To determine if there is a significant difference in treatment adherence and illicit opioid abstinence of adult OUD patients enrolled in MAT and adult OUD patients enrolled in 12-step group therapy at three months and six months after initiation of treatment.
- **AIM 2: Two binary logistic regression models at three months and six months**
 - To predict adherence and illicit opioid abstinence of adult OUD patients using the dichotomous dependent variable. The test controlled for covariates age, marital status, and gender.

Results

Sample Baseline Characteristics (N=81)

Variables	MAT (N=47)	12-step Group (N=34)	t (%) or mean ± SD
Current Age	43.2 ±(10.7)	40.4±(12.9)	
Gender			
Male	24(51.1%)	18(52.9%)	
Female	23(48.9%)	16(47.1%)	
Race			
White Caucasian	30(63.8%)	20(58.8%)	
Hispanic/Latino	12(25.5%)	4(11.8%)	
Black/AA	5(10.6%)	10(29.4%)	
Marital Status			
Single	30(63.8%)	21(61.8%)	
Married/Legally Separated	8(17%)	5(14.7%)	
Divorced/Widowed	9(19.1%)	8(23.5%)	
Language			
English	45(95.7%)	34(100%)	
Spanish	2(4.3%)		

Note: Abbreviations: SD: Standard Deviation; AA: African American; 12-step: 12-Step Group Therapy; MAT: Medication Assisted Treatment.

Discussion

Strengths

- The two interventions that are commonly used for OUD
- Very similar in sample size and demographic characteristics



Limitations

- Sample size
- The selection of participants was limited to one for-profit clinical site
- Data collection was dependent on data that already existed
- The quasi-experimental design does not allow for randomization to experiment or the ability to control; it also cannot test for a causal relationship
- Generalizability of the study findings is not possible
- Only one FDA medication, buprenorphine, was used in MAT
- Perceptions of barriers to adherence were not considered for any of the participants

Implications for Practice

- There has been no study to date that examined or compared the impact on adherence and abstinence specifically with opioid use disorder treatments MAT and 12-step therapy utilizing a 14-panel urine drug screen for assessing adherence and abstinence.
- Empirical evidence states that both MAT and 12-step group therapy are basically 50% effective at treating opioid use disorder (Volkow, 2020).

Implications for Research

Evaluation of other predictors

- Gender and adherence
- Psychosocial support
- Socioeconomical
- Social Determinants of Health

Methods

- Longitudinal and RCT approach
- Mixed-method approach
- Larger sample size

Social Determinants of Health (SDOH)

- The marginalized OUD patients, acute disruption in treatment programs due to the rise in COVID-19 infections, and mandated isolations and shutdowns have created a strain on access and mental health (Alexander et al., 2020; Volkow, 2020).
- Understanding the predictors of OUD will assist in improving outcomes and SDOH.

Future Direction

- Exploring further OUD patients enrolled in MAT or 12-step group therapy in a randomized control trial to explore longer longitudinal treatment adherence and abstinence.
- Exploring OUD patients' perceptions of barriers to treatment adherence and abstinence.

Research Trajectory

- How will my research strengthen DUSON expertise in SDOH?
- Population Health-Improving health outcomes of marginalized pt. with OUD
- Studies on interventions that improve adherence and increase outcomes of pt. with OUD
- Transforming health care access for providers that treat OUD
- NIDA –priorities improve measurements of substance use treatment outcomes

My "Why"



Selected References

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Question & Answers

