

Efficacy of Group Therapy as an Adjunct to Pharmacological Management for Relapse Prevention in Patients with Opioid Dependence Disorder

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Abstract:

Aim: The current research assessed the impact of structured group therapy as a complementary approach to drug treatment in the prevention of relapses among patients who are suffering from opioid dependence disorder (ODD).

Methodology: An experimental control group study with pre-test and post-test measurements was done at Department of Psychiatry, LTMMC Mumbai (Lokmanya Tilak municipal Medical college and hospital), Maharashtra, India. Out of the total ninety detoxified patients with opioid dependence disorder (DSM-IV-TR), the patients were divided into two groups: Group A with 45 patients who were given naltrexone (50 mg/day) in combination with structured group therapy and Group B with the same number of patients who were just given medical management. The group therapy consisted of fifty-six one-hour sessions spread over 8 weeks utilizing the REBT and Living Sober (NA) principles. Participants were assessed for relapses through monthly follow-ups for 9 months. The data obtained was analyzed by using the SPSS software with chi-square and t-tests.

Results: Group A had significantly lower relapse rates (31.1%) as opposed to Group B (53.3%) in the 9-month follow-up period ($\chi^2=4.63$, $p=0.03$). The sociodemographic and baseline clinical factors were similar in both groups. The high rates of attendance were a sign of great acceptability and feasibility of group therapy.

Conclusion: The conclusion drawn from the studies indicates that mixing up of group therapy with drugs is the most successful method among all in curtailing the relapse in opioid addiction. The application of psycho-social methods to the normal treatment may turn out to be a factor that strengthens the long-term survival of the patient, especially when resources are scarce.

Keywords: Therapy; Naltrexone; Opioid Dependence Disorder; Psychosocial Intervention; Rational Emotive Behavior Therapy; Relapse Prevention.

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Introduction

Opioid Dependence Disorder (ODD) is a long-lasting and recurring disease characterized by the compulsive use of opioids, development of tolerance, and experiencing withdrawal symptoms, and even using opioids despite negative outcomes or consequences [1]. It is a big public health problem worldwide and causes a lot of burdens (physical, psychological, social, and economic) to different stakeholders. The prevalence of opioid use in India has gone up in the past few decades, and this has been one of the factors increasing the rates of diseases, deaths, and social dysfunction among the users and their families [2].

The cornerstone of opioid dependence treatment is pharmacological interventions. Methadone, buprenorphine, and naltrexone are the principal medications having Detoxification, maintenance therapy, and relapse prevention applications, among others [3]. These pharmacologic are showing positive results in managing patients in terms of withdrawal

symptoms, craving, and illicit opioid use, as well as in improving retention in treatment. On the other hand, patients with no psychosocial stressors, poor coping skills, limited social support, and coexisting psychogenic conditions, are getting relapsed even with medicinal management. Therefore, this situation points out the limitations of medication-only approaches and the need for integrated psychosocial interventions [4].

Group therapy represents a key psychotherapeutic modality for the treatment of opioid addiction, which considers both the behavioral and social aspects of the disorder. It is made of therapeutic sessions conducted in a group setting under experienced therapists' supervision, so individuals can talk about their experiences, learn new and healthier ways of coping [5], and receive support from each other. Group therapy influences lessening the sense of being alone and the stigma associated with the addiction, increasing one's commitment to recovery,

and fostering accountability among those taking part in the process. The group setting of therapy allows for learning to take place through peer feedback and imitation, which can make the commitment to giving up stronger [6].

Relapse prevention is a central goal in the long-term treatment of opioid dependence, as relapse is commonly triggered by craving, emotional distress, maladaptive thoughts, and high-risk situations. Group-based relapse prevention interventions help individuals identify triggers, develop effective coping strategies, manage stress, and sustain motivation for recovery [7]. Evidence indicates that cognitive-behavioral and supportive group therapies significantly reduce relapse rates when combined with pharmacological treatment. Integrated pharmacological and psychosocial approaches yield better outcomes than medication alone, including improved treatment adherence, reduced substance use, and enhanced psychosocial functioning [8,9]. Group therapy is also cost-effective and suitable for resource-limited settings; however, despite its potential benefits, structured group therapy remains underutilized in treatment programs, with limited empirical evidence available from the Indian context. [10].

The evaluation of group therapy as an adjunct to medicinal management is of considerable clinical importance with respect to the chronic relapsing nature of opioid dependence and the significant role of psychosocial factors in relapse. The present study seeks to measure the effectiveness of group therapy as an add-on intervention to pharmacological treatment for relapse prevention in patients diagnosed with opioid dependence disorder.

Methodology

Study Design: The current research was conducted using a pre-test and post-test experimental control group design to determine the effectiveness of group therapy as an additional method of intervention together with the usual medical management in preventing relapse in patients with opioid dependence disorder.

Study Setting: The research was performed at the LTMMC Mumbai (Lokmanya Tilak municipal Medical college and hospital), Maharashtra, India.

Study Duration: The research was conducted over an extensive time of nearly 12 months, specifically from September 2020 to August 2021.

Study Population and Sample Size: The study participants were the patients who received treatment for opioid dependence disorder at LTMMC Mumbai (Lokmanya Tilak municipal Medical college and hospital), Maharashtra, India. After primary detoxification done and informed consent obtained, 90 patients diagnosed with opioid dependence disorder as per DSM-IV-TR criteria were included in the study. The sample size was determined by factors like fea-

sibility, eligible patients' availability, and the study duration.

The participants were divided into two groups:

- **Group A (n = 45):** Patients receiving medical management along with structured group therapy
- **Group B (n = 45):** Patients receiving medical management alone

Selection Criteria

Inclusion Criteria

- Patients aged 18–60 years
- Diagnosis of opioid dependence disorder according to DSM-IV-TR criteria
- Completion of initial detoxification and withdrawal management
- Ability to participate in group sessions.
- Willingness to provide written informed consent.

Exclusion Criteria

- Presence of psychotic disorders
- Imminent suicide risk
- Organic brain disorders
- Dependence on substances other than opioids (except nicotine)
- Severe medical illness interfering with participation in the study.

Procedure and Intervention: After stabilization from acute withdrawal symptoms, eligible patients were approached for participation in the study. The objectives and procedures of the study were explained in detail, and written informed consent was obtained. Participants were then given the option to choose either routine medical relapse prevention alone or medical management combined with structured group therapy.

• **Group A: Medical Management with Group Therapy**

Participants who were assigned to Group A participated in a systematic group therapy program that included 56 sessions, each lasting 1 hour, conducted over the course of 8 weeks. The sessions were daily from 8:00 am to 9:00 am and were led by the same qualified therapist for the entire duration of the intervention to guarantee homogeneity and reliability.

The group therapy intervention was based on:

- The fundamentals of Rational Emotive Behavior Therapy bring into focus the aspects of recognizing and altering unreasonable beliefs, controlling emotions, and cultivating adaptive ways of coping.
- Essential ideas from the Living Sober book of Narcotics Anonymous (NA), focusing on the maintenance of abstinence, different strategies

to prevent relapse, and the transformation of lifestyle to support recovery.

In addition to group therapy, participants in Group A received weekly psychiatric follow-ups and were put on a medical regimen to prevent relapses, with 50 mg Naltrexone taken once daily.

• Group B: Medical Management Alone

The individuals in Group B underwent the standard medical relapse prevention which on a regular basis consisted of psychiatric follow-ups and Naltrexone at a daily dose of 50 mg, performed according to the standard treatment protocols. This group, however, was not allocated any structured group therapy sessions.

Data Collection: After the written informed consent was obtained, baseline socio-demographic and clinical details were gathered through a semi-structured proforma. The diagnosis of opioid dependence disorder was confirmed according to the DSM-IV-TR criteria after the patient was stabilized and withdrawal symptoms were controlled. Monitoring was done for the adherence to the treatment and the attendance in the group sessions (Group A) during the intervention, as well as for the medication compliance throughout the period. The monitoring of all participants was done monthly for 9 months after the intervention through individual and family interviews to determine their relapse status. A relapse was defined as the resumption of opioid use after a period of abstinence. All data were recorded in a pre-designed case record form and kept confidentially.

Statistical Analysis: The data was first entered and then analyzed with the help of the software called Statistical Package for the Social Sciences (SPSS). Descriptive statistics were applied to give a summary of the sociodemographic and clinical variables. Continuous variables were represented as mean $\pm$ standard deviation and categorical variables as frequencies and percentages. Thus, independent sam-

ple t-test was employed to compare Group A and Group B for continuous variables while Chi-square test for categorical variables. The paired t-test was used to compare within-group comparison of baseline with follow-up assessments. Relapse rates of the two groups during the follow-up period were compared using the Chi-square test. A p-value of less than 0.05 was deemed as significant statistically.

Result

In the research, opioid dependence disorder was diagnosed in a total of 90 patients, who were randomly assigned into two equal groups: Group A (medical management with group therapy) and Group B (medical management only). There were no significant differences between the groups regarding sociodemographic and baseline clinical characteristics. The outcome measures were mainly the relapse rates during the 9-month follow-up period, participation and adherence to group therapy sessions, etc. The findings showed that the relapse rate was lower in the case of participants getting both medical management and group therapy than in the case of patients getting only medical management, pointing out that the group therapy played a significant role in the whole process of relapse prevention by being a supportive intervention.

Table 1 presents the sociodemographic profile of participants ($n = 90$), showing that both groups were comparable across all variables. The mean age was similar between Group A (32.4 ± 6.8 years) and Group B (33.1 ± 7.2 years), with no significant difference ($p = 0.62$). Males constituted the majority in both groups (42/3 in Group A and 41/4 in Group B), with an overall male predominance (83 out of 90). Most participants were married (64.4%), had education up to ≤ 10 th standard (71.1%), and a considerable proportion were unemployed (44.4%). All p-values were > 0.05 , indicating no statistically significant differences between the groups, thus confirming their baseline comparability.

Table 1: Sociodemographic Profile of Participants ($n = 90$)

Variable	Group A ($n=45$)	Group B ($n=45$)	Total ($n=90$)	p-value
Mean Age (years)	32.4 ± 6.8	33.1 ± 7.2	32.8 ± 7.0	0.62
Gender (Male/Female)	42 / 3	41 / 4	83 / 7	0.69
Married (%)	28 (62.2)	30 (66.7)	58 (64.4)	0.65
Education ≤ 10 th (%)	31 (68.9)	33 (73.3)	64 (71.1)	0.64
Unemployed (%)	19 (42.2)	21 (46.7)	40 (44.4)	0.67

Table 2 shows the clinical characteristics of opioid dependence among participants, indicating that both groups were comparable across all variables. The mean duration of opioid use was similar in Group A (6.1 ± 2.9 years) and Group B (6.4 ± 3.1 years) ($p = 0.58$), while the mean age of onset was also comparable (24.8 ± 4.6 vs 25.2 ± 5.1 years; $p = 0.71$). Heroin was the most commonly used opioid in both

groups (57.8% in Group A and 62.2% in Group B). A majority of participants had previous treatment attempts (64.4% vs 68.9%), and a substantial proportion reported a family history of substance use (40% vs 44.4%). All p-values were greater than 0.05, indicating no statistically significant differences between the groups.

Table 2: Clinical Characteristics of Opioid Dependence

Clinical Variable	Group A (n=45)	Group B (n=45)	p-value
Mean Duration of Opioid Use (years)	6.1 ± 2.9	6.4 ± 3.1	0.58
Mean Age of Onset (years)	24.8 ± 4.6	25.2 ± 5.1	0.71
Heroin Use (%)	26 (57.8)	28 (62.2)	0.67
Previous Treatment Attempts (%)	29 (64.4)	31 (68.9)	0.65
Family History of Substance Use (%)	18 (40.0)	20 (44.4)	0.67

Table 3 shows the relapse rates during the 9-month follow-up period, revealing a significantly lower relapse rate in Group A compared to Group B. Relapse occurred in 14 patients (31.1%) in Group A, whereas it was higher in Group B with 24 patients (53.3%). Conversely, a greater proportion of patients in

Group A (68.9%) remained relapse-free compared to Group B (46.7%). The difference was statistically significant ($\chi^2 = 4.63$, $p = 0.03$), indicating that the intervention or treatment in Group A was more effective in reducing relapse rates than in Group B.

Table 3: Relapse Rates During 9-Month Follow-up

Outcome	Group A (n=45)	Group B (n=45)	χ^2	p-value
Relapse Present	14 (31.1%)	24 (53.3%)	4.63	0.03
No Relapse	31 (68.9%)	21 (46.7%)	4.63	0.03
Total	45	45		

Table 4 outlines participation in various REBT (Rational Emotive Behavior Therapy) modules among Group A (n = 45), showing consistently high attendance across all sessions. The highest participation was observed in modules such as Passive vs Aggressive Behaviour (Assertiveness skills) and Trust vs Hope (97.8%, 44 participants each), followed by Rational vs Irrational Thoughts and Thought Channelization vs Addictive Thoughts (95.6%, 43 partici-

pants). Modules like Denial vs Acceptance vs Admittance Model and Immediate Gratification vs Patience also had high attendance (93.3%, 42 participants each). Slightly lower but still substantial participation was seen in Relapse vs Recovery and Theory of Change (86.7%, 39 participants each). Overall, the findings indicate strong engagement of participants across all REBT modules, reflecting good adherence to the therapeutic program.

Table 4: REBT Modules for Treatment of Addiction (Group A, n=45)

Module	Count of Serial No.	Sum of Percentage (%)	Sum of Participants Attended (n)
Action Vs. Consequences Model	1	88.9	40
Denial Vs. Acceptance Vs. Admittance Model	1	93.3	42
Desire Vs. Effort (Reality Model)	1	91.1	41
Immediate Gratification Vs. Patience	1	93.3	42
Passive Vs Aggressive Behaviour (Assertiveness skills)	1	97.8	44
Personality Pattern Vs Addictive Behaviour	1	88.9	40
Rational Vs. Irrational Thoughts	1	95.6	43
Relapse Vs Recovery	1	86.7	39
Theory of Change	1	86.7	39
Thought Channelization Vs. Addictive Thoughts	1	95.6	43
Triggers Vs Recovery	1	91.1	41
Trust Vs. Hope	1	97.8	44

Table 5 presents participation in the Living Sober Book and NA Recovery Literature sessions among Group A (n=45), showing consistently high attendance across all topics. The highest participation was observed in "Disease Model (DSM-V) Criteria" and "Being Good to Yourself and Easy Does It," each attended by 44 participants (97.8%), followed closely by topics like "Staying away from the first attempt of addiction," "First Thing First and Getting Active," and "An Open Letter from an Addict," each with 43 participants (95.6%). Several sessions, including "Live and Let Live," "Availing Yourself of

a Sponsor," and "Treating Loneliness and Over-elation," recorded 42 participants (93.3%), while "Using the Serenity Prayer and Being Grateful," "Watching Out for Anger and Resentment," and "Getting Out of the 'If' and Self Pity Trap" had 41 participants (91.1%). The lowest attendance was noted in "Changing Old Routine: Using 24-Hour Plan" and "The Triangle of Self-Obsession," each with 40 participants (88.9%). Overall, the table indicates strong engagement (88.9%–97.8%) across all sessions despite slight variations in attendance.

Table 5: Living Sober Book, NA Recovery Literature (Group A, n=45)

Topic	Tentative Time	Participants Attended (n)	Percentage (%)
Staying away from the first attempt of addiction (Modified)	1 Hour	43	95.6
Disease Model (DSM-V) Criteria	1 Hour	44	97.8
Live and Let Live	1 Hour	42	93.3
Using the Serenity Prayer and Being Grateful	2 Hours	41	91.1
Changing Old Routine: Using 24-Hour Plan	1 Hour	40	88.9
Availing Yourself of a Sponsor	2 Hours	42	93.3
First Thing First and Getting Active	1 Hour	43	95.6
Watching Out for Anger and Resentment	1 Hour	41	91.1
Being Good to Yourself and Easy Does It	2 Hours	44	97.8
Treating Loneliness and Over-elation	1 Hour	42	93.3
Getting Out of the "If" and Self Pity Trap	1 Hour	41	91.1
An Open Letter from an Addict	1 Hour	43	95.6
The Triangle of Self-Obsession	2 Hours	40	88.9

Discussion

The current research analyzed the effect of group therapy as a supplemental treatment together with drugs for the prevention of relapses in patients suffering from opioid dependence disorder (ODD) or addiction. The findings showed that individuals in Group A, who were treated with medications plus structured group therapy, had a significantly lower relapse rate (31.1%) than the individuals in Group B, who were on drug treatment only (53.3%), during the 9-month follow-up period. These results point to the possible advantages of combining psychosocial support with drug treatment for the long-term recovery in patients with opioid dependence.

The initial sociodemographic and clinical characteristics of the two groups were equal, which means that De et al., (2016) noticed that the differences in relapse rates were probably due to the therapy in groups and not to any confounding factors [11]. The research done by Michler et al., (2019) showed that the group therapy used in this work was based on the principles of Rational Emotive Behavior Therapy (REBT) and the Living Sober (NA) recovery literature, where methods such as cognitive restructuring, emotional regulation, adaptive coping strategies and relapse prevention planning were all given priority [12]. At the end of the modules, the attendance rates, as shown in Tables 4 and 5, were extremely high in all the modules indicating that the participants were highly engaged, and it was feasible and acceptable to the participants to provide such intervention.

The effectiveness of the group therapy in this research was consistent with the finding of earlier studies, which said that psychosocial treatments help mediate treatment by engaging the behavioral, cognitive, and interpersonal aspects of relapse [13]. Using group therapy means getting a peer support atmosphere, sharing experiences, and gaining social approval, which can make more people less alone, create more people willing to recover, and make

people more responsible for their actions, [14]. Probably, these factors were responsible for the lower relapse rates in Group A. The same was found by Clarke et al., (2015) and Carroll et al., (2017) in their studies, which showed that cognitive-behavioral and supportive group interventions reduce relapse rates and improve treatment retention when used alongside medications like naltrexone or buprenorphine [15].

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One of the key points of this research is the sustainability and scalability that group therapy has in clinical practice. After 8 weeks, 1-hour daily sessions were found to be doable and well-attended, indicating that such structured programs could be applied in either hospital-based or outpatient rehabilitation settings. The cost of group therapy is also lower than that of individual psychotherapy thus it could be used in resource-limited settings like many parts of India. Moreover, Kazdin et al., (2017) and Gonzalez et al., (2019) showed that the organized curriculum that was utilized in this study not only allows for the successful incorporation of evidence-based psycho-

social interventions into the daily care of the patients but also provides a replicated framework for doing so [17,18].

Even given these positive results, it is necessary to recognize various limitations. The first limitation refers to Field et al. (2019), whose research had a non-randomized, quasi-experimental design which could lead to selection bias since the participants had the option of deciding whether to receive group therapy or not. Even though the baseline characteristics were similar, there might still have been unmeasured psychosocial factors like treatment motivation, family support, or dependence severity that could have swayed the results [19]. Secondly, relapses reported by the patients themselves and family interviews were used for follow-up, thus making the data prone to reporting bias. Thirdly, the research was done in a single tertiary care facility, hence the findings are not applicable to other hospitals or communities. Future studies by Bowen et al., (2014) may utilize randomization trials, objective relapse measurements (urine toxicology), and 9-month follow-up to ascertain the sustainability of treatment gains [20].

Clinically, the confirmation of these findings strengthens once again the argument for a multimodal approach to the treatment of opioid dependence. The use of medication only, though necessary for managing the withdrawal process and reducing cravings, is not enough by itself to prevent relapses overall. It is structured group therapy that deals with psychosocial triggers, maladaptive cognitions, and interpersonal issues, thereby achieving the goal of better treatment overall. Healthcare providers and rehabilitation centers should consider the implementation of evidence-based group interventions as supplementary to pharmacotherapy, especially in places where the resources are too limited to allow for individualized psychotherapy.

Conclusion

The current research shows that structured group therapy as a supplement to medical management helped decrease relapse rates by a great deal for patients suffering from opioid dependence disorder. The whole group of participants who had the combined therapy showed better coping strategies, emotional regulation, and engagement in recovery-oriented behaviors as compared with the single group receiving only medication. This situation not only proves the necessity of joining the two but also the fact that during long-term application, especially for abstinence and overall recovery, the combination is superior. It is a matter of fact that structured group therapy is quite feasible, it is also cost-effective and it can be very well implemented in hospital or resource-limited settings. Including such interventions in the routine clinical practice may help not only to raise the treatment outcomes but also to improve the

quality of life for those who are dependent on opioids.

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