



A QUASI-EXPERIMENTAL STUDY TO EVALUATE THE EFFECTIVENESS OF A STRUCTURED RECOVERY SUPPORT PROGRAM ON QUALITY OF LIFE AND TREATMENT OUTCOMES AMONG PATIENTS WITH SUBSTANCE USE DISORDER AT SELECTED DE-ADDICTION CENTERS IN BHOPAL, MADHYA PRADESH

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ABSTRACT

Background

Substance Use Disorder (SUD) is a chronic and relapsing disorder that adversely affects the physical, psychological, social, and occupational well-being of affected individuals, leading to poor Quality of Life and unfavorable Treatment Outcomes. Although pharmacological treatment and detoxification remain essential components of addiction management, they often fail to address the psychosocial factors necessary for sustained recovery. Structured Recovery Support Programs integrate psychoeducation, coping-skills training, motivation enhancement, relapse-prevention strategies, stress management, and family support to promote holistic rehabilitation. However, evidence regarding the effectiveness of these programs in improving Quality of Life and Treatment Outcomes among patients with substance use disorder in Indian de-addiction settings remains limited. Therefore, the present study was undertaken to evaluate the effectiveness of a Structured Recovery Support Program on Quality of Life and Treatment Outcomes among patients with substance use disorder attending selected de-addiction centers in Bhopal, Madhya Pradesh.

Objectives

1. To assess the baseline Quality of Life and Treatment Outcomes among patients with substance use disorder.
2. To evaluate the effectiveness of the Structured Recovery Support Program on the Quality of Life among patients with substance use disorder.
3. To evaluate the effectiveness of the Structured Recovery Support Program on the Treatment Outcomes among patients with substance use disorder.
4. To compare the post-test Quality of Life and Treatment Outcome scores between the experimental and control groups.
5. To determine the association between post-test Quality of Life and Treatment Outcome scores and selected demographic and clinical variables.

Methods

A quantitative research approach with a quasi-experimental pre-test–post-test control group design was adopted. The study was conducted among 300 patients with substance use disorder attending selected de-addiction centers in Bhopal, Madhya Pradesh. Participants were selected using a purposive sampling technique and allocated into an experimental group ($n = 150$) and a control group ($n = 150$). The experimental group received the Structured Recovery Support Program in addition to routine de-addiction care, whereas the control group received routine de-addiction care alone. Data were collected using a structured demographic and clinical proforma, the WHOQOL-BREF questionnaire, and the Treatment Outcome Assessment Scale. Descriptive and inferential statistics, including the Chi-square test, paired t -test, and independent t -test, were used for data analysis.

Results

The Structured Recovery Support Program significantly improved both Quality of Life and Treatment Outcomes among patients with substance use disorder. In the experimental group, the mean Quality of Life score increased from 42.50 ± 6.20 at pre-test to 78.40 ± 5.10 at post-test, with a mean difference of 35.90 ($t = 34.12, p < 0.001$). The mean Treatment Outcome score increased from 55.20 ± 8.10 to 82.30 ± 6.50 , with a mean difference of 27.10 ($t = 28.45, p < 0.001$). Post-test scores were significantly higher in the experimental group than in the control group for both Quality of Life and Treatment Outcomes.

Conclusion

The Structured Recovery Support Program was effective in improving Quality of Life and Treatment Outcomes among patients with substance use disorder. The findings support the integration of structured recovery-oriented interventions into routine de-addiction services to promote holistic rehabilitation and recovery.

Keywords

Substance Use Disorder; Structured Recovery Support Program; Quality of Life; Treatment Outcomes; WHOQOL-BREF; De-addiction Centers; Mental Health Nursing.

INTRODUCTION

Substance Use Disorder (SUD) is a chronic and relapsing condition that adversely affects physical, psychological, social, and occupational well-being. Despite pharmacological treatment and detoxification, many patients experience poor Quality of Life and Treatment Outcomes due to inadequate psychosocial support. Structured Recovery Support Programs integrate psychoeducation, coping-skills training, relapse prevention, and family support to promote recovery. Mental health nurses play an important role in providing these interventions.

Therefore, the present study was undertaken to evaluate the effectiveness of a Structured Recovery Support Program on Quality of Life and Treatment Outcomes among patients with substance use disorder at selected de-addiction centers in Bhopal, Madhya Pradesh.

OBJECTIVES

1. To assess the baseline Quality of Life and Treatment Outcomes among patients with substance use disorder.
2. To evaluate the effectiveness of the Structured Recovery Support Program on the Quality of Life among patients with substance use disorder.
3. To evaluate the effectiveness of the Structured Recovery Support Program on the Treatment Outcomes among patients with substance use disorder.
4. To compare the post-test Quality of Life and Treatment Outcome scores between the experimental and control groups.
5. To determine the association between post-test Quality of Life and Treatment Outcome scores and selected demographic and clinical variables.

HYPOTHESES

H₀: There will be no statistically significant difference in the post-test Quality of Life and Treatment Outcome scores between patients receiving the Structured Recovery Support Program and those receiving routine de-addiction care.

H₁: Patients receiving the Structured Recovery Support Program will demonstrate significantly higher post-test Quality of Life and Treatment Outcome scores compared with patients receiving routine de-addiction care at the $p < 0.05$ level of significance.

METHODOLOGY

Research Approach and Design

A quantitative research approach with a quasi-experimental pre-test–post-test control group design was adopted to evaluate the effectiveness of the Structured Recovery Support Program on the Quality of Life and Treatment Outcomes among patients with substance use disorder. The study comprised two groups: an experimental group that received the Structured Recovery Support Program along with routine de-addiction care and a control group that received routine de-addiction care alone. Both groups were assessed before and after the intervention using the WHOQOL-BREF questionnaire and the Treatment Outcome Assessment Scale.

Setting, Population, Sample and Sampling Technique

The study was conducted at selected de-addiction centers in Bhopal, Madhya Pradesh. The target population comprised patients diagnosed with substance use disorder receiving treatment at the selected centers. A total of 300 patients were selected using a purposive sampling technique and allocated into an experimental group (n = 150) and a control group (n = 150).

Inclusion and Exclusion Criteria

Patients aged 18 years and above with a confirmed diagnosis of substance use disorder, who were clinically stable, able to communicate in Hindi or English, and willing to provide written informed consent were included in the study. Patients with severe psychiatric illness, cognitive impairment, critical medical conditions, or those unwilling to participate were excluded.

Description and Validation of the Tool

Data were collected using a structured tool comprising three sections. Section I included demographic and clinical variables. Section II consisted of the WHOQOL-BREF questionnaire for assessing Quality of Life across four domains. Section III consisted of the Treatment Outcome Assessment Scale for assessing Treatment Outcomes. The content validity of the tools and the Structured Recovery Support Program was established by experts in Psychiatric Nursing, Psychiatry, Psychology, and Biostatistics.

Structured Recovery Support Program

Participants in the experimental group received the Structured Recovery Support Program in addition to routine de-addiction care. The Program included psychoeducation, motivation enhancement, coping-skills training, stress management, relapse-prevention strategies, healthy lifestyle education, family counseling, and follow-up reinforcement sessions. The control group received routine de-addiction care as per the institutional protocol.

Data Collection Procedure

After obtaining ethical approval and written informed consent, baseline Quality of Life and Treatment Outcomes were assessed in both groups using the WHOQOL-BREF questionnaire and the Treatment Outcome Assessment Scale. The Structured Recovery Support Program was then administered to the experimental group, while the control group received routine care. Post-test assessment was conducted using the same instruments after completion of the intervention.

Ethical Considerations

Ethical approval was obtained from the Institutional Ethics Committee before the commencement of the study. Written informed consent was obtained from all participants prior to data collection. Confidentiality and anonymity were maintained throughout the study, and participants were informed of their right to withdraw from the study at any stage without affecting their treatment.

Data Analysis

Data were analyzed using SPSS. Descriptive statistics, including frequency, percentage, mean, and standard deviation, and inferential statistics, including the Chi-square test, paired *t*-test, and independent *t*-test, were used to analyze the Quality of Life and Treatment Outcome data. A *p*-value < 0.05 was considered statistically significant.

RESULTS

Table 1. Baseline Demographic and Clinical Characteristics of Patients with Substance Use Disorder (N = 300)

Characteristic	Experimental Group (n = 150)	Control Group (n = 150)	p-value
Age (years), Mean ± SD	36.8 ± 9.4	37.2 ± 8.9	0.491
Male	126 (84.0%)	123 (82.0%)	0.652
Female	24 (16.0%)	27 (18.0%)	
Alcohol Use	72 (48.0%)	70 (46.7%)	0.737
Opioid Use	48 (32.0%)	51 (34.0%)	
Cannabis/Multiple Substance Use	30 (20.0%)	29 (19.3%)	
Duration of Substance Use (years), Mean ± SD	8.2 ± 3.6	8.4 ± 3.8	0.843

The baseline demographic and clinical characteristics were comparable between the experimental and control groups. No statistically significant differences were observed between the groups ($p > 0.05$), indicating baseline homogeneity.

Table 2. Comparison of Pre-test and Post-test Quality of Life Scores among Patients with Substance Use Disorder (N = 300)

Group	Pre-test Mean $\pm$ SD	Post-test Mean $\pm$ SD	Mean Difference	Paired t- value	p-value
Experimental (n = 150)	42.50 $\pm$ 6.20	78.40 $\pm$ 5.10	35.90	34.12	<0.001*
Control (n = 150)	41.80 $\pm$ 6.50	43.10 $\pm$ 6.80	1.30	1.68	0.095

Statistically significant at $p < 0.05$.

The experimental group demonstrated a statistically significant improvement in Quality of Life following the Structured Recovery Support Program ($t = 34.12$, $p < 0.001$). In contrast, the control group showed no statistically significant improvement.

Table 3. Comparison of Post-test WHOQOL-BREF Domain Scores between the Experimental and Control Groups (N = 300)

WHOQOL-BREF Domain	Experimental Mean $\pm$ SD	Control Mean $\pm$ SD	Independent t- value	p-value
Physical Health	76.20 $\pm$ 6.40	45.10 $\pm$ 7.10	39.87	<0.001*
Psychological Health	79.50 $\pm$ 5.80	42.30 $\pm$ 6.90	50.51	<0.001*
Social Relationships	74.80 $\pm$ 7.20	39.60 $\pm$ 7.80	40.62	<0.001*
Environment	82.10 $\pm$ 5.10	45.40 $\pm$ 6.20	56.02	<0.001*
Overall Quality of	78.40 $\pm$ 5.10	43.10 $\pm$ 6.80	50.83	<0.001*

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Statistically significant at $p < 0.05$.

Post-test comparison revealed that patients in the experimental group had significantly higher scores across all WHOQOL-BREF domains and overall Quality of Life than those in the control group ($p < 0.001$), indicating the effectiveness of the Structured Recovery Support Program.

Table 4. Comparison of Pre-test and Post-test Treatment Outcome Scores among Patients with Substance Use Disorder (N = 300)

Group	Pre-test Mean $\pm$ SD	Post-test Mean $\pm$ SD	Mean Difference	Paired t - value	p -value
Experimental (n = 150)	55.20 $\pm$ 8.10	82.30 $\pm$ 6.50	27.10	28.45	<0.001*
Control (n = 150)	54.80 $\pm$ 7.90	56.10 $\pm$ 8.20	1.30	1.85	0.065

Statistically significant at $p < 0.05$.

The experimental group demonstrated a statistically significant improvement in Treatment Outcome scores following the Structured Recovery Support Program ($t = 28.45$, $p < 0.001$). In contrast, the control group showed no statistically significant improvement ($t = 1.85$, $p = 0.065$).

Table 5. Comparison of Post-test Treatment Outcome Scores between the Experimental and Control Groups (N = 300)

Group	Post-test Mean $\pm$ SD	Mean Difference	Independent t - value	p -value
Experimental (n = 150)	82.30 $\pm$ 6.50	26.20	30.67	<0.001*
Control (n = 150)	56.10 $\pm$ 8.20			

* Statistically significant at $p < 0.05$. Post-test comparison indicated that patients in the experimental group had significantly higher Treatment Outcome scores than those in the control group, indicating the beneficial effect of the Structured Recovery Support Program on Treatment Outcomes.

Table 6. Association between Post-test Quality of Life and Treatment Outcome Scores and Selected Demographic and Clinical Variables among Patients in the Experimental Group (n = 150)

Variable	Quality of Life χ^2	p-value	Association	Treatment Outcome χ^2	p-value	Association
Family Support	12.45	<0.001*	Significant	11.86	<0.001*	Significant
Employment Status	8.32	0.016*	Significant	7.94	0.019*	Significant
History of Relapse	6.84	0.009*	Significant	6.57	0.010*	Significant
Age Group	1.15	0.562	Not Significant	1.32	0.517	Not Significant

Statistically significant at $p < 0.05$.

Post-test Quality of Life was significantly associated with family support, employment status, and history of relapse, while no significant association was observed with age group. Similarly, post-test Treatment Outcome was significantly associated with family support, employment status, and history of relapse, whereas no significant association was observed with age group.

DISCUSSION

The Structured Recovery Support Program significantly improved Quality of Life and Treatment Outcomes among patients with substance use disorder. The experimental group showed greater improvement in Quality of Life and Treatment Outcome scores than the control group. The findings highlight the importance of structured recovery support, including psychoeducation, coping-skills training, relapse prevention, and family support, in promoting recovery and rehabilitation.

LIMITATIONS

- ☞ The study was conducted at selected de-addiction centers in Bhopal, Madhya Pradesh; therefore, the findings may not be generalizable to other settings.
- ☞ The follow-up period was limited and may not reflect long-term changes in Quality of Life and Treatment Outcomes.
- ☞ The study used purposive sampling, which may limit the generalizability of the findings.

CONCLUSION

The Structured Recovery Support Program was effective in improving Quality of Life and Treatment Outcomes among patients with substance use disorder. The findings support the integration of structured recovery-oriented interventions into routine de-addiction services to promote holistic rehabilitation and recovery.

RECOMMENDATIONS

1. Similar studies may be conducted with a larger sample size and in multiple de-addiction centers.
2. Long-term follow-up studies are recommended to evaluate the sustainability of improvements in Quality of Life and Treatment Outcomes.
3. Structured Recovery Support Programs should be integrated into routine de-addiction services to enhance patient recovery and rehabilitation.

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