



## Recovery Outcome of Drug Addicts After Rehabilitation

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**ABSTRACT:** Drug addiction has become one of the most serious social and public health problems affecting individuals across different age groups and socioeconomic backgrounds. Substance abuse not only damages physical and mental health but also disrupts family relationships, employment, education, and social stability. Rehabilitation centers have been established to provide medical treatment, psychological counselling, behavioral therapy, and social support for individuals struggling with drug dependence. This study examines the recovery outcomes of drug addicts after rehabilitation and evaluates the effectiveness of rehabilitation programs in promoting long-term recovery and reintegration into society. The primary objective of the study is to analyse the physical, psychological, emotional, and social changes experienced by individuals after completing rehabilitation treatment. The research also seeks to identify the major factors influencing successful recovery, including family support, peer influence, counselling services, vocational rehabilitation, follow-up care, and community acceptance. The study adopts a qualitative research approach, with data collected from 100 rehabilitated drug users through an interview schedule. Statistical analysis was conducted using SPSS software. The findings demonstrate that rehabilitation programs can significantly improve recovery outcomes when combined with continuous counselling, family involvement, social support, and post-rehabilitation care. The study further reveals that recovery is a gradual and ongoing process requiring personal commitment, supportive environments, and access to mental health and social services.

**KEYWORDS:** Drug Addiction, Rehabilitation, Recovery Outcomes, Relapse, Substance Abuse, Social Reintegration, Post-Rehabilitation, Mental Health

### I. INTRODUCTION

A drug generally refers to narcotic drugs and psychotropic substances, including natural or

synthetic substances that affect the central nervous system and are regulated under the act.

Drug addiction has become one of the most serious public health, social, and economic challenges in modern society. The misuse of psychoactive substances not only affects the physical and mental health of individuals but also disrupts families, weakens social structures, and places a heavy burden on healthcare systems and national economies. Addiction is widely recognized as a chronic and relapsing condition characterized by compulsive drug use despite harmful consequences. Individuals struggling with substance dependence often experience deterioration in health, loss of employment, social isolation, criminal involvement, and reduced quality of life.

Rehabilitation programs have been developed as a primary response to address drug addiction and to support individuals in overcoming substance dependence. These programs typically include detoxification, medical treatment, psychological counselling, behavioural therapy, and life-skills training. The primary goal of rehabilitation is not only to achieve abstinence from drugs but also to promote long-term recovery by addressing the underlying psychological, emotional, and social causes of addiction. Despite the availability of various rehabilitation models, recovery outcomes among drug addicts vary significantly, and relapse remains a major concern following discharge from rehabilitation centers.

Recovery after rehabilitation is a complex and multidimensional process that extends beyond the treatment period. Successful recovery involves sustained abstinence, improved physical and mental health, restoration of self-esteem, and effective reintegration into family, workplace, and society. Many rehabilitated drug addicts face numerous post-treatment challenges, including lack of family support, unemployment, social stigma, mental health issues, and limited access to aftercare services. These challenges can significantly influence recovery outcomes and increase the risk of relapse if not adequately addressed.



This research focuses on the recovery outcomes of drug addicts after rehabilitation, aiming to evaluate the effectiveness of rehabilitation programs in promoting sustained recovery and social reintegration. By analyzing physical, psychological, and social outcomes, the study seeks to identify key factors that contribute to successful recovery as well as barriers that hinder long-term progress.

### 1.1 Drug Classification

The Misuse of Drugs Act of 1971 divides banned substances into Classes A, B, and C according to the harm they cause. Class A drugs (most dangerous) include heroin, cocaine, crack cocaine, ecstasy (MDMA), LSD, magic mushrooms, crystal meth, and the majority of synthetic opioids, carrying penalties of up to seven years imprisonment for possession and life for supply. Class B drugs such as cannabis, synthetic cannabinoids, amphetamines, ketamine, and mephedrone carry penalties of up to five years for possession and fourteen years for supply. Class C drugs (least dangerous) including benzodiazepines, GHB, anabolic steroids, and khat, carry a maximum of two years for possession and fourteen years for supply.

The NDPS Act of 1985 in India specifies penalties based on the quantity of drugs involved. Small quantities attract a fine of up to ₹10,000 and rigorous one-year imprisonment; intermediate quantities attract fines up to ₹1 lakh and up to 10 years imprisonment; and commercial quantities attract fines of ₹1–2 lakhs and imprisonment of at least 10 to 20 years. For repeat offenders, penalties may include a minimum of 15 years imprisonment or even capital punishment.

## II. REVIEW OF LITERATURE

**Sheffet et al. (1980)** developed a comparative evaluation outcome model for drug abuse treatment programs in Newark, New Jersey, involving 3,943 individuals. Retention rates varied widely across modalities, with methadone maintenance showing the highest retention (65%), followed by therapeutic communities and outpatient drug-free programs. Analysis of dropout and graduate outcomes revealed significant reductions in drug use and criminal behavior across programs, highlighting the importance of matching clients to appropriate treatment modalities.

**Finch et al. (2018)** evaluated Recovery High Schools (RHSs) through a quasi-experimental study of 194 adolescents from Minnesota, Wisconsin, and Texas. Students attending RHSs for at least 28 days showed significantly better outcomes at six-month follow-up, including higher rates of abstinence from alcohol,

marijuana, and other substances, lower marijuana use, and reduced school absenteeism, indicating RHSs are an effective post-treatment intervention.

**Sterling et al. (2008)** examined recovery capital among 323 alcohol-dependent individuals undergoing inpatient treatment. Exploratory factor analysis supported the multidimensional nature of recovery capital, with modest associations found between recovery capital and proximal and distal treatment outcomes. The study concluded that further research is needed to develop a comprehensive measure of recovery capital.

**Min et al. (2011)** conducted a pilot study on relapse prevention (RP) group therapy among 100 male heroin-dependent individuals in China. The RP group showed significant improvements in anxiety reduction, self-efficacy, self-esteem, and abstinence rates at three-month follow-up compared to the control group, highlighting relapse prevention as a valuable component of substance abuse treatment.

**McDuff et al. (1994)** examined the role of addiction-trained psychiatric consultants in substance abuse treatment settings, proposing a developmentally based model for psychiatric consultation. Key responsibilities identified included diagnostic assessment, identification of recovery barriers, provision of brief psychotherapy, and pharmacological management, underscoring the crucial role of psychiatric consultation in enhancing treatment effectiveness.

**McLellan et al. (1986)** extended previous research to diverse populations including adolescents, females, and higher socioeconomic groups. Using the Addiction Severity Index at treatment admission and six-month follow-up, significant improvements were confirmed in substance use, employment, criminal behavior, and psychological health. Pre-treatment psychiatric problems were identified as the strongest predictor of treatment outcomes.

**French et al. (1993)** examined the influence of length of stay in drug abuse treatment on post-treatment outcomes. Longer duration in treatment was significantly associated with reductions in drug use severity, drug-related problems, and criminal activity. Residential treatment programs demonstrated the greatest impact, underscoring the importance of adequate treatment duration for improving recovery outcomes.

**Chang et al. (2016)** investigated predictors of substance use disorder inpatient hospitalization following residential rehabilitation among 64 U.S. veterans. Key predictors included prior inpatient admissions, opioid use disorder, and shorter lengths of stay. Longer treatment duration and absence of



opioid use disorder were associated with reduced rehospitalization risk.

**Appel et al. (2004)** identified multiple barriers to treatment enrollment among injection drug users in New York City, including lack of insurance, homelessness, childcare concerns, and limited treatment slots. Strategies proposed to improve access included relaxing admission requirements, increasing funding, enhancing inter-agency coordination, and integrating harm reduction approaches.

### III. METHODOLOGY

**Aim:** This research aims to examine the recovery outcomes of drug addicts after rehabilitation, with a focus on evaluating the effectiveness of rehabilitation programs in achieving sustained abstinence, psychological well-being, and social reintegration, as well as identifying the factors that influence long-term recovery or relapse.

**Objectives:**

- To identify the recovery rate of people who are under substance abuse after rehabilitation.
- To find out the relapse rate and the challenges encountered in the rehabilitation program.
- To examine the physical and mental changes that occurred after drug consumption.

- To assess social reintegration outcomes, including family relationships, employment status, and community participation.
- To identify the duration of treatment, the type of rehabilitation program, and support systems.

**Research Design:** The study adopts an experimental research design. Research method: Qualitative. Sample size: 100. Targeted sample: Male and female individuals who have been involved in substance use. Age group: 15–60 years. Tool for data collection: Interview schedule. Source of data: Primary data collection. Tool of data analysis: SPSS software.

**Variables:** Independent variables include type of rehabilitation program, duration, type of substance abuse, and aftercare of treatment. Dependent variables include relapse rate, physical health status, and absence of drug use.

### IV. RESULTS AND DISCUSSIONS

This chapter presents the findings of the study on recovery outcomes of drug addicts after rehabilitation. Data collected from 100 respondents are analysed using frequency distributions, percentages, chi-square tests, and graphical representations. The analysis covers demographic characteristics, drug use history, rehabilitation experience, post-rehabilitation outcomes, and the significance of associations between key variables.

#### Section A: Demographic Profile of Respondents

**Table 4.1: Age Distribution of Respondents**

Age Group	Frequency (n)	Percentage (%)	Cumulative (%)
15 – 20 years	5	5.0%	5.0%
21 – 30 years	30	30.0%	35.0%
31 – 40 years	21	21.0%	56.0%
Above 40 years	44	44.0%	100.0%
Total	100	100.0%	–

The majority of respondents (44%) were above 40 years of age, indicating that long-term drug addiction predominantly affects the older adult population in the study sample. Respondents aged 21–30 formed the second largest group at 30%, followed by those aged 31–40 at 21%. The 30% representation of the 21–30 cohort suggests that young adults also remain a significantly vulnerable group and warrant targeted early intervention strategies.

**Table 4.2: Gender Distribution of Respondents**

Gender	Frequency (n)	Percentage (%)	Cumulative (%)
Male	100	100.0%	100.0%
Total	100	100.0%	–

All 100 respondents (100%) in this study were male. The exclusively male sample reflects real-world patterns in drug rehabilitation in India, where male users significantly outnumber female users admitted to treatment



facilities. Future studies should deliberately include female respondents to provide a comprehensive understanding of gender differences in recovery outcomes.

**Table 4.3: Education Level of Respondents**

Education Level	Frequency (n)	Percentage (%)	Cumulative (%)
6th – 12th Standard	67	67.0%	67.0%
Undergraduate	30	30.0%	97.0%
Postgraduate	2	2.0%	99.0%
Illiterate	1	1.0%	100.0%
Total	100	100.0%	–

**Table 4.4: Employment Status of Respondents**

Employment Status	Frequency (n)	Percentage (%)	Cumulative (%)
Employed	92	92.0%	92.0%
Unemployed	7	7.0%	99.0%
Other	1	1.0%	100.0%
Total	100	100.0%	–

The vast majority of respondents (92%) were employed at the time of the study, while only 7% were unemployed. This challenges the stereotypical assumption that drug addiction is exclusively associated with unemployment and economic deprivation. Post-rehabilitation vocational counselling and job placement support remain essential components of holistic recovery.

### Section B: Drug Use History

**Table 4.5: Type of Substance Used by Respondents**

Type of Substance	Frequency (n)	Percentage (%)	Cumulative (%)
Marijuana	76	76.0%	76.0%
LSD	13	13.0%	89.0%
Morphine	8	8.0%	97.0%
Cocaine	3	3.0%	100.0%
Total	100	100.0%	–

Marijuana was by far the most commonly used substance (76%), reflecting national trends where cannabis remains the most commonly abused substance in India. Marijuana is frequently the gateway substance before escalation to harder drugs. The 8% morphine usage is concerning given its high addiction potential and severe withdrawal symptoms.

**Table 4.6: Duration of Drug Use Before Rehabilitation**

Duration	Frequency (n)	Percentage (%)	Cumulative (%)
Less than 6 months	3	3.0%	3.0%
1 Year	2	2.0%	5.0%
2 Years	3	3.0%	8.0%
More than 3 Years	92	92.0%	100.0%



Total	100	100.0%	–
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An overwhelming 92% of respondents had been using drugs for more than 3 years before entering rehabilitation. This alarming finding indicates a critical delay in treatment-seeking behaviour. This delay could be attributed to stigma, lack of awareness, denial, or limited access to rehabilitation services. Early identification and intervention programmes are essential to reduce the average duration of addiction before rehabilitation entry.

**Table 4.7: Age at First Drug Use**

Age at First Use	Frequency (n)	Percentage (%)	Cumulative (%)
15 – 20 years	45	45.0%	45.0%
21 – 30 years	44	44.0%	89.0%
31 – 40 years	10	10.0%	99.0%
Above 40 years	1	1.0%	100.0%
Total	100	100.0%	–

89% of respondents initiated drug use before the age of 30 — predominantly in adolescence and early adulthood — consistent with global research indicating that early initiation is a strong predictor of long-term dependence. These findings underscore the critical need for early prevention programmes in schools and colleges targeting the 15–20 age group.

### Section C: Rehabilitation Experience

**Table 4.8: Completion of Rehabilitation Programme**

Programme Completion	Frequency (n)	Percentage (%)	Cumulative (%)
Yes (Completed)	22	22.0%	22.0%
No (Did Not Complete)	78	78.0%	100.0%
Total	100	100.0%	–

Only 22% of respondents completed their rehabilitation programme, while a substantial majority (78%) did not. This alarmingly high dropout rate reflects the well-documented challenge of treatment retention in drug rehabilitation. Rehabilitation centres must address dropout through motivational enhancement therapies, flexible programme structures, peer support mechanisms, and proactive follow-up during early stages of treatment.

**Table 4.9: Quality of Care Received During Rehabilitation**

Quality of Care	Frequency (n)	Percentage (%)	Cumulative (%)
Very Good	94	94.0%	94.0%
Good	5	5.0%	99.0%
Average	1	1.0%	100.0%
Total	100	100.0%	–

An overwhelming majority (94%) rated the quality of care received during rehabilitation as 'Very Good', while 5% rated it 'Good' and only 1% rated it 'Average'. No respondents rated care as 'Bad'. Collectively, 99% rated care positively, reflecting high satisfaction with the rehabilitation facility's services.



#### Section D: Post-Rehabilitation Outcomes

**Table 4.10: Relapse After Rehabilitation**

Relapse Status	Frequency (n)	Percentage (%)	Cumulative (%)
Yes (Relapsed)	87	87.0%	87.0%
No (Did Not Relapse)	13	13.0%	100.0%
Total	100	100.0%	–

An extremely high proportion of respondents (87%) reported relapsing after completing or leaving the rehabilitation programme, while only 13% maintained abstinence without relapse. The 87% relapse rate is the most critical and alarming finding of this study, underscoring that rehabilitation, while necessary, is not sufficient in

itself to ensure long-term recovery. This is consistent with the chronic, relapsing disease model of addiction advocated by McLellan et al. (1986). Comprehensive aftercare programmes, relapse prevention therapy, community-based follow-up, and peer support networks are imperative to reduce this unacceptably high relapse rate.

**Table 4.11: Reasons for Relapse After Rehabilitation**

Reason for Relapse	Frequency (n)	Percentage (%)	Cumulative (%)
Overconfidence	32	32.0%	32.0%
Peer Pressure	30	30.0%	62.0%
Stress	25	25.0%	87.0%
Lack of Support	13	13.0%	100.0%
Total	100	100.0%	–

Overconfidence was the most frequently cited reason for relapse (32%), followed closely by peer pressure (30%) and stress (25%). Lack of support was the least cited reason at 13%. Overconfidence post-rehabilitation — sometimes described as 'recovery complacency' — leads individuals to believe they are

cured and capable of controlling use, only to succumb to their addictive behaviours. Relapse prevention programmes must specifically address cognitive distortions related to overconfidence, stress management skills, and strategies to resist peer influence.

**Table 4.12: Drug-Free Duration After Rehabilitation**

Drug-Free Period	Frequency (n)	Percentage (%)	Cumulative (%)
Three Months	41	41.0%	41.0%
Six Months	14	14.0%	55.0%
One Year	7	7.0%	62.0%
More than One Year	38	38.0%	100.0%
Total	100	100.0%	–

The distribution of drug-free periods reveals a bimodal pattern: 41% were drug-free for three months and 38% maintained drug-free status for more than one year. The 38% who maintained sobriety for more than one year suggest that sustained

recovery is achievable for a significant proportion. Enhanced aftercare support during the 6–12 month post-rehabilitation window is essential to bridge those achieving short-term sobriety toward long-term recovery.



**Section E: Health and Social Outcomes**

**Table 4.13: Physical Health Status After Rehabilitation**

Physical Health Status	Frequency (n)	Percentage (%)	Cumulative (%)
Good	14	14.0%	14.0%
Improved	32	32.0%	46.0%
Same	53	53.0%	99.0%
Worst	1	1.0%	100.0%
Total	100	100.0%	–

**Table 4.14: Mental Health Status After Rehabilitation**

Mental Health Status	Frequency (n)	Percentage (%)	Cumulative (%)
Good	14	14.0%	14.0%
Improved	16	16.0%	30.0%
Same	68	68.0%	98.0%
Worst	2	2.0%	100.0%
Total	100	100.0%	–

While 46% reported improved or good physical health post-rehabilitation, 53% felt their physical health was unchanged. More concerning, 68% of respondents reported unchanged mental health after rehabilitation, with only 30% reporting positive mental health outcomes. This finding points to

significant limitations in the psychological component of treatment. Integrated psychiatric services, cognitive behavioural therapy, and mental health monitoring must be systematically incorporated into rehabilitation protocols.

**Table 4.15: Family Support After Rehabilitation**

Family Support Level	Frequency (n)	Percentage (%)	Cumulative (%)
Strong	90	90.0%	90.0%
Moderate	8	8.0%	98.0%
None	2	2.0%	100.0%
Total	100	100.0%	–

**Table 4.16: Experience of Stigma or Discrimination**

Stigma/Discrimination	Frequency (n)	Percentage (%)	Cumulative (%)
Yes (Experience Stigma)	65	65.0%	65.0%
No (No Stigma)	35	35.0%	100.0%
Total	100	100.0%	–

A large majority of respondents (90%) reported strong family support after rehabilitation. Despite this, the 87% relapse rate indicates that family support alone is insufficient to prevent relapse. The majority of respondents (65%) also reported experiencing stigma or discrimination after

rehabilitation, which constitutes a significant barrier to sustained recovery and social reintegration. Community-based anti-stigma campaigns, legislative protections for recovering individuals, and public education are essential.



**Table 4.17: Satisfaction with Rehabilitation Programme**

Satisfaction Level	Frequency (n)	Percentage (%)	Cumulative (%)
Very Good	83	83.0%	83.0%
Average	7	7.0%	90.0%
Poor	6	6.0%	96.0%
Good	4	4.0%	100.0%
Total	100	100.0%	–

The vast majority of respondents (83%) reported 'very good' satisfaction with the rehabilitation programme, and 87% expressed positive satisfaction overall. However, the disconnect between high satisfaction (87%) and high relapse rate (87%)

signals that satisfaction with treatment does not translate automatically into recovery outcomes. Future evaluations should move beyond satisfaction surveys to include long-term sobriety tracking and functional recovery measures.

**Table 4.18: Challenges Faced After Rehabilitation**

Post-Rehab Challenge	Frequency (n)	Percentage (%)	Cumulative (%)
High Risk of Relapse	38	38.0%	38.0%
Mental Health Issue	27	27.0%	65.0%
Employment Issue	18	18.0%	83.0%
Social Stigma	17	17.0%	100.0%
Total	100	100.0%	–

High risk of relapse was the most frequently cited post-rehabilitation challenge (38%), followed by mental health issues (27%), employment issues (18%), and social stigma (17%). The distribution shows that challenges are spread across multiple domains — psychological, occupational, and social — indicating the multidimensional nature of post-rehabilitation difficulties requiring a comprehensive, multi-sector response.

#### Section F: Chi-Square Analysis of Significant Associations

Chi-square ( $\chi^2$ ) tests of independence were conducted to determine statistically significant associations between key rehabilitation and recovery variables at  $p < 0.05$ .

**Table 4.19: Chi-Square Analysis Summary**

Variable 1	Variable 2	$\chi^2$ Value	df	p-value	Result
Relapse After Rehab	Follow-Up Care	7.991	2	0.018	Significant*
Drug-Free After Rehab	Duration of Programme	19.958	9	0.018	Significant*
Mental Health	Relapse After Rehab	13.027	3	0.005	Significant*
Satisfaction of Rehab	Quality of Care	18.387	6	0.005	Significant*

\*  $p < 0.05$  — Statistically Significant

The chi-square analysis identified four statistically significant associations. First, a

significant association between relapse and follow-up care ( $\chi^2(2) = 7.991, p = 0.018$ ) confirms that the



presence or absence of follow-up care is meaningfully related to whether an individual relapses. Second, a significant association between drug-free duration and programme duration ( $\chi^2(9) = 19.958, p = 0.018$ ) provides robust empirical support for the dose-response relationship between treatment duration and recovery outcomes. Third, a highly significant association between mental health status and relapse ( $\chi^2(3) = 13.027, p = 0.005$ ) confirms that poor mental health after rehabilitation is strongly associated with relapse — arguably the most clinically important result. Fourth, a highly significant association between rehabilitation satisfaction and quality of care ( $\chi^2(6) = 18.387, p = 0.005$ ) validates the centre's high-quality care standards as the primary driver of patient satisfaction.

#### V. SUMMARY OF MAJOR FINDINGS

- The study population was entirely male (100%), predominantly above 40 years of age (44%), with most having education up to the 6th–12th standard level (67%) and the majority employed (92%).
- Marijuana was the predominant substance of abuse (76%), inhalation was the primary mode of intake (77%), and 92% of respondents had been using drugs for more than three years before rehabilitation.
- The age at first use was primarily 15–20 years (45%), indicating early initiation as a major risk factor for long-term dependency.
- Nearly all respondents (99%) attended inpatient rehabilitation and received Medication-Assisted Treatment (MAT). Only 22% completed their rehabilitation programme.
- A high relapse rate of 87% was recorded, with overconfidence (32%), peer pressure (30%), and stress (25%) as the leading causes of relapse.
- Mental health remained unchanged in 68% of respondents post-rehabilitation, and physical health was unchanged in 53%, indicating limited health improvement outcomes.
- 65% of respondents experienced stigma or discrimination post-discharge, posing a major barrier to social reintegration.
- Chi-square analysis identified four statistically significant associations: (1) relapse vs. follow-up care ( $p = 0.018$ ); (2) drug-free duration vs. programme duration ( $p = 0.018$ ); (3) mental health vs. relapse ( $p = 0.005$ ); and (4) programme satisfaction vs. quality of care ( $p = 0.005$ ).

#### VI. CONCLUSION

This study on the recovery outcomes of drug addicts after rehabilitation reveals critical insights into both the strengths and limitations of current rehabilitation practices. While rehabilitation

programs provide essential medical treatment and garner high satisfaction and quality-of-care ratings, the alarming 87% relapse rate demonstrates that formal treatment alone is insufficient for ensuring long-term recovery. Recovery is a gradual, multidimensional, and lifelong process that requires not only effective inpatient treatment but also robust post-discharge support systems encompassing mental health care, relapse prevention education, vocational support, and community reintegration.

The high dropout rate (78%), limited mental health improvements (only 30% improved), and widespread social stigma (65%) collectively underscore the systemic gaps in the rehabilitation ecosystem. Policymakers, healthcare providers, and rehabilitation institutions must prioritise comprehensive aftercare, evidence-based minimum treatment durations, integrated psychiatric services, and anti-stigma campaigns to improve recovery outcomes. Successful recovery ultimately depends on a combination of professional treatment, family and community support, and sustained personal motivation toward positive life changes.

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