



# Internalized Stigma and its Correlates Among Opioid Agonist Treatment Service Users in Nepal

Sagun Ballav Pant · Suraj Bahadur Thapa · John Howard · Saroj Prasad Ojha · Lars Lien

Received: 10 April 2023 / Accepted: 10 June 2023  
© The Author(s) 2023

**Abstract** Opioid use disorder is associated with high levels of stigma and discrimination, which impact treatment seeking and compliance. Despite extensive evidence as an optimal intervention for opioid use disorder, enrollment in Opioid Agonist Treatment (OAT) in settings like Nepal, is accompanied by moral judgements and stigma with a broad narrative of it being merely a replacement of ‘one addiction with another’. Stigma is eventually internalized by many service users impacting enrollment and maintenance in OAT, and quality of life. This study aimed to assess internalized stigma among OAT service users in Nepal and to explore its association with sociodemographic characteristics, lifetime mental disorders and quality

of life. A cross-sectional study was conducted among 231 OAT service users, the survey instrument included the Mini-International Neuropsychiatric Interview for DSM-5, Internalized Stigma of Mental Illness Inventory (ISMI) and the World Health Organization Quality of Life –BREF. Factors associated with quality of life and internalized stigma were investigated using bivariate and multivariate analyses. More than half (56.28%) of respondents reported having high internalized stigma with a mean ISMI score of  $2.71 \pm 0.64$ . All 29 ISMI items were found to have a mean score greater than 2.5 indicating a high burden of internalized stigma. Service users reporting

---

S. B. Pant (✉) · S. B. Thapa  
Division of Mental Health and Addiction, Institute of Clinical Medicine, University of Oslo, Oslo, Norway  
e-mail: pants@uio.no;  
sagun055@gmail.com

S. B. Thapa  
e-mail: suraj.thapa@medisin.uio.no

J. Howard  
National Drug and Alcohol Research Centre, Faculty of Medicine, University of New South Wales, Sydney, Australia  
e-mail: jphoward.work@gmail.com

S. B. Pant · S. B. Thapa · S. P. Ojha  
Department of Psychiatry, Institute of Medicine, Tribhuvan University, Kathmandu, Nepal  
e-mail: ojhasp@yahoo.com

L. Lien  
National Advisory Unit on Concurrent Substance Abuse and Mental Health Disorders, Innlandet Hospital Trust, Hamar, Norway  
e-mail: lars.lien@sykehuset-innlandet.no

L. Lien  
Faculty of Social and Health Sciences, Inland Norway University of Applied Sciences, Elverum, Norway

S. B. Thapa  
Division of Mental Health and Addiction, Oslo University Hospital, Oslo, Norway

higher internalized stigma had significantly lower quality of life across all domains, greater medical comorbidity, lifetime anxiety and depressive disorder and alcohol use disorder. To lessen stigma and its impacts, our findings recommend a national initiative targeting stigma reduction interventions for existing OAT services and beneficiaries.

**Keywords** Internalized stigma · Mental disorder · Opioid agonist treatment · Quality of life · Nepal

### Abbreviations

CBO	Community-based organization
CI	Confidence interval
ISMI	Internalized stigma of mental illness inventory
M.I.N.I.	Mini international neuropsychiatric interview
OAT	Opioid agonist treatment
OD	Opioid use disorder
OR	Odds ratio
PSU	Primary sample units
QoL	Quality of life
SD	Standard deviation
STATA	Statistical software for data science
SUD	Substance use disorder
WHO	World health organization

### Introduction

Stigma is recognized as a major barrier to health-seeking behavior and treatment compliance across a variety of health issues (Digiusto & Treloar, 2007; Fox et al., 2018; Stangl et al., 2019; Tan et al., 2020; Volkow, 2020). In ancient Greece, ‘Stigma’ meant a burn, mark, or tattoo on an individual as a sign of shame, punishment or disgrace (Economou et al., 2020). In the present context, it can be defined as ‘a negative social attitude attached to a characteristic of an individual that may be regarded as a mental, physical, or social deficiency’. Stigma implies social disapproval and can lead unfairly to discrimination against and exclusion of the individual (American Psychological Association, 2023). Other factors that are associated with stigma includes gender, race, age, locality, socioeconomic position, and level of education, sexual orientation, as well as the length of drug

use (Ghosh et al., 2022; Gyawali et al., 2018; Paquette et al., 2018).

Stigma has personal, social and structural dimensions. Social stigma refers to the negative or discriminatory attitudes that others have, for example, to a person with a substance use disorder. Structural stigma is more systemic and refers to government and non-government policies that intentionally or unintentionally constrain opportunities for certain people, and self-stigma, also known as internalized stigma, is the term used to describe someone’s negative attitudes toward their own predicament (Borenstein, 2020; Corrigan et al., 2012; Livingston et al., 2012).

Internalized stigma can be defined as a process whereby affected individuals accept projected stereotypes, expect social rejection, and believe the stereotypes to be relevant to them personally (Livingston & Boyd, 2010). Internalized stigma has also been described as a self-devaluation process, constituting the following stages. First, awareness of negative attitude held towards you (e.g., “They say people using drugs are irresponsible”); second, agreement or consensus with public opinions (e.g., “I think drug users are not responsible”); third, application of stereotype to self (e.g., “I am irresponsible because I use drugs”) which leads to the reduced self-esteem and self-efficacy (Ali, 2019; Corrigan et al., 2009).

Substance use disorders face greater stigma compared to other health issues (Ronzi et al., 2009; Schomerus et al., 2011). Additionally, substance use behaviors are connected to a variety of other stigmatized health conditions (e.g., HIV/AIDS, mental disorders, viral Hepatitis, etc.), risky behaviors, and other societal issues like poverty and criminality (Dean & Rud, 1984; Degenhardt et al., 2023; Habib & Adorjany, 2003; Livingston et al., 2012). Extensive research indicates that those who experience internalized stigma are more likely to have poor mental health and can engage in avoidant coping, which leads to social withdrawal (Lysaker et al., 2007; Ritsher & Phelan, 2004). Internalized stigma has also been linked to engaging in risky behaviours, higher levels of psychological distress and lower quality of life (Sarkar et al., 2017), severity of mental disorders and poor treatment adherence (Livingston & Boyd, 2010). Internalized stigma and dissatisfaction with quality of life are high among people with substance use disorders. However, there is evidence that the impacts of stigma can be alleviated, for example the perception

of support from friends and family can reduce the impact of perceived stigma on depression among people with drug use disorders (Chang et al., 2022). Despite evidence for interventions that can reduce the impacts of stigma, it remains an important issue among individuals with opioid dependence on their quality of life, health services access, delays in service utilization and retention in treatment and, more broadly, participation in society.

The existing drug policies in Nepal tend to criminalize personal use and possession of substance and not see substance use behaviors from a medical perspective. This approach can create fear of arrest along with increased stigma and discrimination which in-turn may create barriers for people who use drugs to seek treatment and receive care, and makes recovery, rehabilitation, and reintegration into the community difficult (Pant et al., 2023a, b).

Opioid Agonist Treatment (OAT), effective evidence supported modality of treatment has been used to support rehabilitation and recovery among people with opioid use disorders in the community rather than residential rehabilitation homes and treatment centers (McKetin et al., 2023). After more than 15 years since re-introduction of OAT services in Nepal, the OAT program has had barriers to expansion of service sites, enrollment rates and retention of service clients. The number of OAT service users (methadone and buprenorphine combined) in Nepal reduced from about 1300 to 900 five years later in 2020 (Asian Network of People who Use Drugs, 2019; National Center for AIDS and STD Control, 2020). While there are many factors related to this, such as changes in structural funding, policy barriers for expansion of OAT services, inadequate demand generation activities targeting OAT, defect in inter-sectoral co-ordination mechanism between relevant stakeholders and the COVID-19 pandemic played a role. However, stigma and discrimination towards people who use drugs including service users at a community, family and structural level, and existing internalized stigma among OAT service users may have led to underutilization of OAT services (Ambekar et al., 2010; National Center for AIDS and STD Control, 2020; Pant et al., 2022; Pant, Thapa, et al., 2023). From a service users' perspective, the maintenance of 'addict/junkie' identification and the societal expectation of recovery as abstinence or completion of treatment worsens internalized stigma (Carlisle et al., 2023;

Cheetham et al., 2022). OAT services provided in Nepal by government hospitals and non-governmental organizations are psycho-socially assisted, free of cost, low-threshold, bound by rules of strict privacy and confidentiality and with representation and engagement of service receiver/ ex-drug user. However, service users have reported a wide variation in service-based stigma, perceived confidentiality, and staff behavior including use of stigmatizing language and discriminatory conduct (Asian Network of People who Use Drugs, 2019). Such experiences are important factors that intensify stigma among service users.

To our knowledge, no study has been conducted to better understand internalized stigma among OAT users in Nepal. Therefore, this study aims;

- To explore internalized stigma among Opioid Agonist Treatment (OAT) service users and how it is associated with sociodemographic characteristics and mental disorders.
- To examine domains of Quality of Life (QoL) among OAT service users with high and low internalized stigma.

## Method

### Setting

A cross-sectional study was conducted across five OAT service providers in the Kathmandu Valley from January 2021 to August 2021. A government and a community-based organization (CBO) run site were chosen from Kathmandu and Lalitpur metropolitan areas of Kathmandu Valley, while only a CBO was chosen at Bhaktapur in the absence of another service provider. The Kathmandu Valley was chosen for convenience, and it is representative of OAT service users across the country. In addition, it is the only geographical area with provision of OAT through both government hospitals and non-government/ community setting.

### Recruitment and Participants

The required total sample size was calculated by using single population proportion formula for finite population and was determined to be 247 after adding 15% non-response rate. The final number of service users

who participated in the study was 231 with a response rate of 93.52%. Each of the five OAT sites were considered as the Primary Sample Units (PSU). The number of participants for each PSU was calculated proportionately based on the existing number of service users in each OAT site. From each OAT site, the non-identifying serial numbers were listed for all potential service users who were then selected through computer generated random numbers. The total number of participants from Kathmandu, Lalitpur and Bhaktapur were 92, 109 and 30 respectively. The details of methodology used in this study is available in a previously published articles (Pant et al., 2022; Pant et al., 2023a, b).

## Measurement

### *Socio-Demographic Questionnaire*

Socio-demographic questionnaires were designed to collect participant data for demographic characteristics which included age, gender, educational attainment, employment situation, medical co-morbidity, and socioeconomic status. Substance use history included questions on use of multiple substances including injectable drug use, past quit attempt, history of drug peddling, and duration since OAT enrollment. The questionnaires were reviewed and amended as part of the pretesting process.

### *Mini International Neuropsychiatric Interview (M.I.N.I.) for DSM-5*

Lifetime mental disorders were assessed using translated and adapted version of the Mini International Neuropsychiatric Interview (M.I.N.I.) for DSM-5 7.0.2, which is an internationally validated diagnostic tool for assessing mental disorders (Sheehan et al., 1998). The Nepali translated version of M.I.N.I. consisted of a total of 16 modules (Dhimal et al., 2022). For this study common mental disorders including anxiety disorder, depressive disorder, psychotic disorder, and antisocial disorder were examined. The lifetime observation of panic disorder, agoraphobia, social anxiety disorder and generalized anxiety disorder were combined and re-categorized together as lifetime anxiety disorder. All common mental disorders examined were evaluated in 'lifetime' diagnostic time frame except alcohol use

disorder which was based on a timeframe of 1 year (past 12 months).

### *Internalized Stigma of Mental Illness Inventory (ISMI)*

Internalized stigma was assessed through Internalized Stigma of Mental Illness inventory (ISMI). The ISMI examines internalized stigma against people with mental illnesses. It has 29 items distributed across five subscales: "Alienation," which has six items, "Stereotype Endorsement," which has seven, "Discrimination Experience," which has five, "Social Withdrawal," which has six items, and "Stigma Resistance," which has five items. From "strongly agree" to "strongly disagree," all items are rated on a 4-point Likert scale (4 = strongly agree to 1 = strongly disagree) and it is a self-report questionnaire (Ritscher & Phelan, 2004). ISMI can be interpreted in four category method (Lysaker et al., 2007), and two category method (Ritscher & Phelan, 2004). According to four category method, mean total stigma score are divided as minimal to no internalized stigma (1.00–2.00), mild (2.01–2.50), moderate (2.51–3.00) and severe (3.01–4.00) internalized stigma. In the two/binary category method, the first two and later two categories of the four category methods are combined respectively and scores from 1.00 to 2.50 categorized as 'high internalized stigma not reported' and scores from 2.51 to 4.00 as 'high internalized stigma reported'. ISMI-29 item tool has been translated, pre-tested and adapted in Nepali language by mental health professionals with an internal consistency (Cronbach's alpha) of 0.87 (Dhungana et al., 2022; Shrestha, 2019).

### *World Health Organization Quality of Life -BREF*

World Health Organization Quality of Life (WHO-QOL-BREF) questionnaire has 26 items evaluating quality of life (QoL) based on physical health (7 items), psychological wellbeing (6 items), social relationship (3 items) and environmental domain (8 items) (Kim, 2014). A Likert scale with five points is used to rate each item in a positive direction where higher scores denote higher QoL. The WHOQOL-BREF has been translated into Nepali and utilized in research previously (Giri et al., 2013).

Data Analysis

Statistical software for data science (STATA) version 17 was used for statistical analyses (StataCorp, 2021). The descriptive results are presented in the form of mean, standard deviation for continuous variables and frequency, and percentage for categorical variables. The normal distribution of the continuous variables was checked by using histograms, assessment of skewness and kurtosis and Kolmogorov–Smirnov test (Kim, 2013). The difference in mean was measured using independent *t* tests.

Those reporting high internalized stigma was used as a dependent variable. For inferential statistics, chi-square test was used for examination of bivariate association between categorical variables followed by multivariate logistic regression in the final models. Variables found significant in the bivariate analyses with a *p* value < 0.25, were first checked for confounding and those with variation inflation factor less than 2 were entered in the final models to test our hypotheses. Hosmer and Lemeshow test were used to determine the goodness of fit of the final logistic regression model. Additionally, Spearman rank correlation was done to study correlation between subscales of internalized stigma and domains of QoL. Statistical significance was considered at *p* value < 0.05 and 95% confidence interval (CI).

Results

About one in nine (92.2%) service users was male, and the mean age of the participants was 33.80 ± 7.30. The details of the socio-demographic characteristics of the OAT service users in this study is available in previously published papers (Pant et al., 2022; Pant et al., 2023a, b).

All 29 items of ISMI scale had a mean score greater than 2.5. The lowest mean score was observed for two items of stereotype endorsement. The mean score in item 6 “Mentally ill people shouldn’t get married.” was 2.52 ± 1.10 and item 23 “I can’t contribute anything to society because I have a mental illness.” was 2.52 ± 1.03. In contrary the highest mean score was for Item 16 “I am disappointed in myself for having a mental illness.” with a score of 3.01 ± 0.86) which is an item representing stigma alienation. (The

details of all 29 items are mentioned in the Supplementary Table 1).

All the internalized stigma subscales had a mean score greater than 2.5 indicating high internalized stigma. The mean score of total internalized stigma was 2.71 ± 0.64, where stigma alienation score had the highest mean of 2.83 ± 0.64 and stigma resistance score had the lowest mean of 2.64 ± 0.72. (Table 1).

The highest frequency (44.16%) was observed for severe internalized stigma and lowest frequency (14.72%) for minimal to no internalized stigma. (Table 2). High internalized stigma was not reported in 101 (43.72%) and reported in 130 (56.28%) based on ‘two category method’ which combines the first two and last two categories of the ‘four category method’.

Table 3 reveals that all the domains of QoL along with the total QoL score had significantly lower mean scores among those reporting higher internalized stigma in comparison to those not reporting. It depicts that OAT service users with high internalized stigma had lower QoL in comparison to those not reporting internalized stigma.

As seen in Table 4, medical co-morbidity, lifetime anxiety disorder, lifetime depressive disorder and alcohol use disorder in the past year showed significant association with those reporting high internalized stigma. The history of multiple substance use was associated with those reporting high internalized stigma before adjustment in the bivariate model. Those having lifetime depressive disorder were more than five times more likely to have reported high internalized stigma. Likewise, service users with alcohol use disorder and lifetime anxiety disorder were around four times and those with medical co-morbidity were twice as likely to have high

**Table 1** Mean and standard deviations (SD) of total stigma and 5 subscales of ISMI

Stigma variables	Mean	SD
Total stigma score	2.71	0.64
Stigma alienation score	2.83	0.64
Stereotype endorsement	2.66	0.75
Discrimination experience score	2.72	0.68
Stigma withdrawal score	2.72	0.66
Stigma resistance score	2.64	0.72

**Table 2** Level of internalized stigma among OAT service users

Internalized stigma	N (%)
Minimal to no	34 (14.72)
Mild	67 (29.00)
Moderate	28 (12.12)
Severe	102 (44.16)
Total	231 (100%)

internalized stigma than those who did not. (Table 4). The mean ISMI score (including all subscales of internalized stigma) of OAT service users correlated negatively with all domains of QoL. (Supplementary Table 2).

**Table 3** Comparison of mean (SD) QoL scores among those not reporting vs reporting high internalized stigma

Domains of QoL	High internalized stigma		<i>t</i> ( <i>p</i> value)
	Not reported (N = 101) Mean (SD)	Reported (N = 130) Mean (SD)	
Physical	26.66 (4.33)	24.40 (4.95)	3.63, <i>p</i> < 0.001
Psychological	22.34 (3.87)	19.96 (4.31)	4.36, <i>p</i> < 0.001
Social	10.48 (2.82)	9.28 (2.69)	3.31, <i>p</i> < 0.001
Environmental	28.56 (4.20)	26.98 (4.77)	2.63, <i>p</i> < 0.01
Total QoL	94.8 (13.38)	87.07 (15.13)	4.05, <i>p</i> < 0.001

**Table 4** Factors associated with service users reporting high internalized stigma

Variables (N = 231)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Age > 33 years (vs. Age < 33 years)	0.9 (0.52,1.50)	0.7 (0.39,1.34)
Gender (vs. female)	1.03 (0.39,2.72)	–
Education (vs. secondary or lower)	1.32 (0.78,2.22)	–
Unemployed (vs. employed)	0.56 (0.29,1.04)	0.60 (0.29,1.23)
Upper SES (vs. lower)	0.66 (0.39,1.12)	0.77 (0.42,0.43)
Duration of OAT > 6 months (vs. less)	1.64 (0.95,2.86)	1.57 (0.80,3.06)
Injectable drug user (vs. no)	1.48 (0.88,2.50)	0.82 (0.32,2.06)
Multiple substance use (vs. no)	1.71 (1.01,2.89) *	1.2 (0.49,2.94)
Medical co-morbidity (vs. no)	2.08 (1.22,3.54) **	2.00 (1.04,3.82) *
History of drug peddling (vs. no)	1.19 (0.69,2.05)	–
Quit attempt in the past (vs. no)	1.33 (0.783,2.25)	–
Lifetime anxiety disorder (vs. no)	4.07 (1.85,8.90) ***	3.91 (1.66,9.21) **
Lifetime depressive disorder (vs. no)	4.98 (2.36,10.50) ***	5.02 (2.23,11.31) ***
Lifetime psychotic disorder (vs. no)	1.95 (0.67,5.73)	–
Lifetime antisocial disorder (vs. no)	1.64 (0.71,3.83)	–
Alcohol use disorder in past year (vs. no)	3.09 (1.44,6.64) **	4.20 (1.80,9.78) **

\**p* value < 0.05, \*\*  
*p* value < 0.01, \*\*\*  
*p* value < 0.001  
*OR* odds ratio  
*CI* confidence interval

**Discussion**

This study evaluated internalized stigma among OAT service users where more than half of the participants reported high internalized stigma. The overall prevalence of internalized stigma is consistent with previous studies (Can & Tanriverdi, 2015; Chang et al., 2019; Ghosh et al., 2022; Kulesza et al., 2017; Sarkar et al., 2017; Shrestha, 2019). However, more evidence is required to better understand internalized stigma in resource poor settings such as Nepal, particularly qualitative studies, and to develop culturally appropriate and effective interventions.

The highest mean score for “stigma alienation” among all stigma categories is a significant finding of our study. The Internalized Stigma scale’s alienation domain shows the most often reported stigmatized



experiences (Akdağ et al., 2018; Ghosh et al., 2022; Kulesza et al., 2017). Poverty, social exclusion, denial of access to services, lack of family support, structural issues, and discrimination, for example, have a role in this. There is a limited number of studies in resource poor settings aimed at untangling the complex cultural, legal, social, personal and economic contexts within which such stigma is initiated, escalates and is maintained.

Many people with opioid use disorder (OUD) encounter stigma associated with receiving OAT. The stigma surrounding drug use and its treatment can be a substantial barrier (Hadland et al., 2018). People with substance use disorder are less likely to seek treatment and are also more prone to alienate themselves from society. The external stigma that can result from receiving OAT combined with resultant internalized stigma may make recovery and reintegration problematic.

Our observations make it evident that those who report experiencing more internalized stigma have lower QoL. Despite the fact that the OAT program is evidence-based and offers psychosocial support, these results support prior studies exploring the connection between self-stigma and QoL, as self-stigma strongly impacted all QoL domains (Ghosh et al., 2022; Ivkovic & Wakeman, 2018; Sarkar et al., 2017).

It is not surprising that people who have mental disorders exhibit higher levels of internalized stigma. Depression and anxiety symptoms are common in OUD patients and positively correlated with internalized stigma (Akdağ et al., 2018; Brown et al., 2015; Chang et al., 2016; Cheng et al., 2019; Drapalski et al., 2013). The double burden of stigma, stigma associated with drug use on the one hand and stigma associated with mental disorder on the other, has a negative impact on QoL. In this study, significant levels of internalized stigma were more prevalent in participants with lifetime depression and anxiety disorders. Our findings highlight the complexity of internalized stigma and medical and psychiatric co-morbidity in patients with opioid dependence and mental illness.

Poor socioeconomic conditions are known to be associated with stigma and exclusion, and may exacerbate problems associated with substance use (Room, 2005). Given the reported impacts of socio-demographic factors on internalized stigma among OAT users, we were surprised that some socio-demographic factors in our study including socio-

economic conditions were not significantly associated with high internalized stigma. This finding, similar to some previous studies (Brown et al., 2015; Ghosh et al., 2022) could be a result of the participants being better educated than those on other studies and living in the urban capital. However, higher stigma scores were associated with lower educational status and higher proportions of income spent on substances in the study conducted in India (Gupta et al., 2019). Further research in resource poor settings might include greater emphasis on including qualitative methodologies.

## Implications

The significant impacts of internalized stigma found in this study are consistent with a growing body of research (Volkow, 2020). Initiating, exacerbating, and reinforcing stigma and discrimination are attitudes and beliefs, influenced by stereotypes, misinformation, ‘moralism’, positing ‘abstinence’ as the goal. Not limited to resource poor settings, there is a need to review existing guidelines for addressing stigma and discrimination towards people who use drugs, including OAT service users.

Review of content in medical and allied health programs, journalism and media courses is necessary, as are attempts to influence how people who use drugs are portrayed in print, on screen, stage and in social media, and how language matters as it can increase or help reduce stigma (Thornicroft et al., 2022). Strengthened evidence-informed information focused on the complexity of substance use, the common comorbidities including physical and mental disorders, and increasing opportunities to support rehabilitation and reintegration including access to education, employment, and secure housing, can challenge existing stigma and enhance change (NIDA, 2018).

Strategies at the individual level that have been found effective in addressing stigma associated with mental disorders and HIV, such as psychoeducation, acceptance-based treatment, non-stigmatising language, and empowerment enhancement may assist reducing OAT participants internalised stigma, especially as the three areas have a significant overlap (Cheetham et al., 2022; Fox, 2018; Ghosh et al., 2022; Thornicroft et al., 2022). Tackling broader media and community stigma that contributes to internalised

stigma is a challenge, OAT providers can avail themselves of all opportunities to address and educate the community, media, and politicians about the impacts of stigmatising language, stereotypes and misinformation (Thornicroft et al., 2022).

## Limitation

Certain limitations should be considered when interpreting the results of this study. Participant recruitment may have been influenced by sample bias because OAT sites in the Kathmandu valley were used, which is the capital of Nepal, and stigma can possibly be more prominent in rural and less developed areas. Moreover, the external validity of the results may be constrained due to the homogeneous small sample and the limited study sites, which restricts the generalizability of the findings. All of Nepal's OAT service providers including other drug treatment rehabilitation centers should be included in future studies, along with a larger representative sample, and greater female participation. While the strength of causal inference is restricted by the cross-sectional study design, this study brings to light the burden of internalized stigma among OAT service users which is known to affect treatment outcome, retention, and achievement of OAT goals including minimization of stigma and its impacts.

## Conclusion

More than one in two OAT service users in this study reported high internalized stigma, and high internalized stigma was associated with a lower QoL. Medical co-morbidity, lifetime anxiety, depressive and alcohol use disorders showed significant association with those reporting high internalized stigma. Despite being in an evidence-informed OAT program with standard operating procedures, psychosocial assistance and staff supervision, stigma can remain or even intensify unless there is continued and routine surveillance and reflection on programme procedures, protocols, use of language and encouragement of overt and anonymous participant feedback and critique.

**Supplementary Information** The online version contains supplementary material available at <https://doi.org/10.1007/s40737-023-00353-4>.

**Acknowledgements** We would like to express our sincere gratitude to all the OAT service users who participated in this study. We are grateful to Mr. Suvash Nayaju for his assistance in reviewing and proofreading the manuscript.

**Author Contributions** SBP: research planning, design, data collection, analysis and drafting of the first manuscript. ST: research planning, design, and co-supervision of the study from the beginning. JH: research planning and manuscript preparation. SPO: research planning, design, and manuscript preparation. LL: research planning, design, and supervision of the study from the beginning. All the authors critically revised the manuscript and gave final approval for publication.

**Funding** Open access funding provided by University of Oslo (incl Oslo University Hospital). The research is funded by the "Collaboration in Higher education in Mental health between Nepal and Norway- the COMENTH/NORPART project" The funding institution was not involved in data collection, analysis and manuscript writing and finalization.

**Availability of Data and Materials** The datasets regarding the current study are available at [https://figshare.com/articles/dataset/S1\\_Dataset\\_/22026131](https://figshare.com/articles/dataset/S1_Dataset_/22026131)

## Declarations

**Conflict of interest** The authors declare that they have no competing interests.

**Ethics Approval** The ethical approval for this study was obtained from the Regional Committees for Medical and Health Research Ethics in Norway (Ref. no: 154194) and Nepal Health Research Council (Ref. no: 1698).

**Consent to Participate** All necessary information about the research project was shared with the participants, and written informed consent was obtained.

**Consent for Publication** Not applicable—no identifying data utilised.

**Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.



## References

- Akdağ, E. M., Kotan, V. O., Kose, S., Tıkkır, B., Aydemir, M. Ç., Okay, İ. T., Göka, E., & Özkaya, G. (2018). The relationship between internalized stigma and treatment motivation, perceived social support, depression and anxiety levels in opioid use disorder. *Psychiatry and Clinical Psychopharmacology*, 28(4), 394–401. <https://doi.org/10.1080/24750573.2018.1478190>
- Ali, A. M. (2019). Internalized stigma is associated with psychological distress among patients with substance use disorders in Egypt. *Research Article Journal of Systems and Integrative Neuroscience J Syst Integr Neurosci*. <https://doi.org/10.15761/JSIN.1000209>
- Ambekar, A., Pun, A., & Suresh Kumar, M. (2010). *A Review of Opioid Substitution Therapy (OST) Programme in Nepal*. [https://www.researchgate.net/publication/279969767\\_A\\_Review\\_of\\_Opioid\\_Substitution\\_Therapy\\_OST\\_Programme\\_in\\_Nepal/citations#fullTextFileContent](https://www.researchgate.net/publication/279969767_A_Review_of_Opioid_Substitution_Therapy_OST_Programme_in_Nepal/citations#fullTextFileContent)
- American Psychological Association. (2023). *APA Dictionary of Psychology*. American Psychological Association. <https://dictionary.apa.org/stigma>
- Asian Network of People who Use Drugs. (2019). *Community Based Quality Monitoring study of key Harm Reduction Services for People Who Inject Drugs in Nepal*. [www.anpud.org](http://www.anpud.org)
- Borenstein, J. (2020, August). *Stigma, Prejudice and Discrimination Against People with Mental Illness*. American Psychiatric Association. <https://www.psychiatry.org/patients-families/stigma-and-discrimination>
- Brown, S. A., Kramer, K., Lewno, B., Dumas, L., Sacchetti, G., & Powell, E. (2015). Correlates of Self-Stigma among Individuals with Substance Use Problems. *International Journal of Mental Health and Addiction*, 13(6), 687–698. <https://doi.org/10.1007/S11469-015-9559-9/METRICS>
- Can, G., & Tanriverdi, D. (2015). Social Functioning and Internalized Stigma in Individuals Diagnosed with Substance Use Disorder. *Archives of Psychiatric Nursing*, 29(6), 441–446. <https://doi.org/10.1016/j.apnu.2015.07.008>
- Carlisle, V. R., Maynard, O. M., Bagnall, D., Hickman, M., Shorrock, J., Thomas, K., & Kesten, J. (2023). Should I Stay or Should I Go? A Qualitative Exploration of Stigma and Other Factors Influencing Opioid Agonist Treatment Journeys. *International Journal of Environmental Research and Public Health* 2023, Vol. 20, Page 1526, 20(2), 1526. <https://doi.org/10.3390/IJERPH20021526>
- Chang, C. C., Wu, T. H., Chen, C. Y., & Lin, C. Y. (2016). Comparing Self-stigma Between People With Different Mental Disorders in Taiwan. *The Journal of Nervous and Mental Disease*, 204(7), 547–553. <https://doi.org/10.1097/NMD.0000000000000537>
- Chang, C. W., Chang, K. C., Griffiths, M. D., Chang, C. C., Lin, C. Y., & Pakpour, A. H. (2022). The mediating role of perceived social support in the relationship between perceived stigma and depression among individuals diagnosed with substance use disorders. *Journal of Psychiatric and Mental Health Nursing*, 29(2), 307–316. <https://doi.org/10.1111/JPM.12794>
- Chang, K. C., Lin, C. Y., Chang, C. C., Ting, S. Y., Cheng, C. M., & Wang, J. Der. (2019). Psychological distress mediated the effects of self-stigma on quality of life in opioid-dependent individuals: A cross-sectional study. *PLOS ONE*, 14(2), e0211033. <https://doi.org/10.1371/JOURNAL.PONE.0211033>
- Cheetham, A., Picco, L., Barnett, A., Lubman, D. I., & Nielsen, S. (2022). The Impact of Stigma on People with Opioid Use Disorder, Opioid Treatment, and Policy. *Substance Abuse and Rehabilitation*, 13, 1. <https://doi.org/10.2147/SAR.S304566>
- Cheng, C. M., Chang, C. C., Wang, J. Der, Chang, K. C., Ting, S. Y., & Lin, C. Y. (2019). Negative Impacts of Self-Stigma on the Quality of Life of Patients in Methadone Maintenance Treatment: The Mediated Roles of Psychological Distress and Social Functioning. *International Journal of Environmental Research and Public Health* 2019, Vol. 16, Page 1299, 16(7), 1299. <https://doi.org/10.3390/IJERPH16071299>
- Corrigan, P. W., Larson, J. E., & Rüsch, N. (2009). Self-stigma and the “why try” effect: impact on life goals and evidence-based practices. *World Psychiatry*, 8(2), 75. <https://doi.org/10.1002/J.2051-5545.2009.TB00218.X>
- Corrigan, P. W., Powell, K. J., & Rüsch, N. (2012). How does stigma affect work in people with serious mental illnesses? *Psychiatric Rehabilitation Journal*, 35(5), 381–384. <https://doi.org/10.1037/H0094497>
- Dean, J. C., & Rud, F. (1984). The drug addict and the stigma of addiction. *The International Journal of the Addictions*, 19(8), 859–869. <https://doi.org/10.3109/10826088409061991>
- Degenhardt, L., Webb, P., Colledge-Frisby, S., Ireland, J., Wheeler, A., Ottaviano, S., Willing, A., Kairouz, A., Cunningham, E. B., Hajarizadeh, B., Leung, J., Tran, L. T., Price, O., Peacock, A., Vickerman, P., Farrell, M., Dore, G. J., Hickman, M., & Grebely, J. (2023). Epidemiology of injecting drug use, prevalence of injecting-related harm, and exposure to behavioural and environmental risks among people who inject drugs: a systematic review. *The Lancet Global Health*. [https://doi.org/10.1016/S2214-109X\(23\)00057-8](https://doi.org/10.1016/S2214-109X(23)00057-8)
- Dhimal, M., Dahal, S., Adhikari, K., Koirala, P., Bista, B., Luitel, N., Pant, S., Marahatta, K., Shakya, S., Sharma, P., Ghimire, S., Gyanwali, P., Ojha, S. P., & Jha, A. K. (2022). A Nationwide Prevalence of Common Mental Disorders and Suicidality in Nepal: Evidence from National Mental Health Survey, 2019–2020. *Journal of Nepal Health Research Council*, 19(4), 740–747. <https://doi.org/10.33314/JNHRC.V19I04.4017>
- Dhungana, S., Tulachan, P., Chapagai, M., Pant, S. B., Lama, P. Y., & Upadhyaya, S. (2022). Internalized stigma in patients with schizophrenia: A hospital-based cross-sectional study from Nepal. *PLoS One*, 17(3). <https://doi.org/10.1371/JOURNAL.PONE.0264466>
- Digiusto, E., & Treloar, C. (2007). Equity of access to treatment, and barriers to treatment for illicit drug use in Australia. *Addiction (Abingdon, England)*, 102(6), 958–969. <https://doi.org/10.1111/J.1360-0443.2007.01842.X>
- Drapalski, A. L., Lucksted, A., Perrin, P. B., Aakre, J. M., Brown, C. H., DeForge, B. R., & Boyd, J. E. (2013). A model of internalized stigma and its effects on people with

- mental illness. *Psychiatric Services*, 64(3), 264–269. <https://doi.org/10.1176/APPL.PS.001322012/ASSET/IMAGES/LARGE/264FI.JPEG>
- Economou, M., Bechraki, A., & Charitsi, M. (2020). The stigma of mental illness: A historical overview and conceptual approaches. *Psychiatrike = Psychiatriki*, 31(1), 36–46. <https://doi.org/10.22365/JPSYCH.2020.311.36>
- Fox, A. B., Smith, B. N., & Vogt, D. (2018). How and when does mental illness stigma impact treatment seeking? Longitudinal examination of relationships between anticipated and internalized stigma, symptom severity, and mental health service use. *Psychiatry Research*, 268, 15–20. <https://doi.org/10.1016/J.PSYCHRES.2018.06.036>
- Ghosh, A., Roub, F., Pillai, R. R., Mahintamani, T., Basu, D., Subodh, B. N., & Mattoo, S. K. (2022). Course and Correlates of Stigma in Patients on Opioid Agonist Treatment: A Prospective Study from an Outpatient Treatment Program in India. *Indian Journal of Psychological Medicine*, 44(3), 246–252. <https://doi.org/10.1177/02537176211012103>
- Giri, S., Neupane, M., Pant, S., Timalsina, U., Koirala, S., Timalsina, S., & Sharma, S. (2013). Quality of life among people living with acquired immune deficiency syndrome receiving anti-retroviral therapy: a study from Nepal. *HIV/AIDS (Auckland, N.Z.)*, 5, 277. <https://doi.org/10.2147/HIV.S50726>
- Gupta, P., Panda, U., Parmar, A., & Bhad, R. (2019). Internalized stigma and its correlates among treatment seeking opium users in India: A cross-sectional observational study. *Asian Journal of Psychiatry*, 39, 86–90. <https://doi.org/10.1016/J.AJP.2018.12.004>
- Gyawali, S., Sarkar, S., Balhara, Y. P. S., Kumar, S., Patil, V., & Singh, S. (2018). Perceived stigma and its correlates among treatment seeking alcohol and opioid users at a tertiary care centre in India. *Asian Journal of Psychiatry*, 37, 34–37. <https://doi.org/10.1016/J.AJP.2018.07.018>
- Habib, S. E., & Adorjany, L. V. (2003). Hepatitis C and injecting drug use: The realities of stigmatisation and discrimination. *Health Education Journal*, 62(3), 256–265. <https://doi.org/10.1177/001789690306200307>
- Hadland, S. E., Park, T. W., & Bagley, S. M. (2018). Stigma associated with medication treatment for young adults with opioid use disorder: a case series. *Addiction Science & Clinical Practice* 2018 13:1, 13(1), 1–4. <https://doi.org/10.1186/S13722-018-0116-2>
- Ivkovic, A., & Wakeman, S. (2018). Personal viewpoint on opioid agonist therapy and transplantation. *American Journal of Transplantation*, 18(12), 2869–2872. <https://doi.org/10.1111/AJT.15109>
- Kim, H.-Y. (2013). Statistical notes for clinical researchers: assessing normal distribution (2) using skewness and kurtosis. *Restorative Dentistry & Endodontics*, 38(1), 52. <https://doi.org/10.5395/RDE.2013.38.1.52>
- Kim, S. (2014). World Health Organization Quality of Life (WHOQOL) Assessment. *Encyclopedia of Quality of Life and Well-Being Research*, 7260–7261. [https://doi.org/10.1007/978-94-007-0753-5\\_3282](https://doi.org/10.1007/978-94-007-0753-5_3282)
- Kulesza, M., Watkins, K. E., Ober, A. J., Osilla, K. C., & Ewing, B. (2017). Internalized stigma as an independent risk factor for substance use problems among primary care patients: Rationale and preliminary support. *Drug and Alcohol Dependence*, 180, 52. <https://doi.org/10.1016/J.DRUGALCDEP.2017.08.002>
- Livingston, J. D., Milne, T., Fang, M. L., & Amari, E. (2012). The effectiveness of interventions for reducing stigma related to substance use disorders: a systematic review. *Addiction*, 107(1), 39–50. <https://doi.org/10.1111/J.1360-0443.2011.03601.X>
- Livingston, J. D., & Boyd, J. E. (2010). Correlates and consequences of internalized stigma for people living with mental illness: a systematic review and meta-analysis. *Social Science & Medicine* (1982), 71(12), 2150–2161. <https://doi.org/10.1016/J.SOCSCIMED.2010.09.030>
- Lysaker, P. H., Roe, D., & Yanos, P. T. (2007). Toward Understanding the Insight Paradox: Internalized Stigma Moderates the Association Between Insight and Social Functioning, Hope, and Self-esteem Among People with Schizophrenia Spectrum Disorders. *Schizophrenia Bulletin*, 33(1), 192. <https://doi.org/10.1093/SCHBUL/SBL016>
- McKetin, R., Thapa, P., Uthurralt, N., Bo, A., Degenhardt, L., Farrell, M., Mounteney, J., Griffiths, P., & Degan, T. (2023). An Overview Of The Evidence For Substance Use Interventions - University of New South Wales. *NDARC*. <https://doi.org/10.26190/yb4b-1c31>
- National Center for AIDS and STD Control. (2020). *HIV epidemic update of Nepal*. NCASC. <https://www.ncasc.gov.np/>
- NIDA. (2018). *Principles of Drug Addiction Treatment: A Research-Based Guide (Third Edition)*. National Institute of Drug Abuse, National Institutes of Health. <https://nida.nih.gov/sites/default/files/675-principles-of-drug-addiction-treatment-a-research-based-guide-third-edition.pdf>
- Pant, S. B., Gurung, B., & Howard, J. (2023). Recovery and Rehabilitation from Alcohol, Substance Use and Related Disorders in Nepal: Call for Paradigm Shift. *Journal of Psychosocial Rehabilitation and Mental Health* 2023, 1–4. <https://doi.org/10.1007/S40737-023-00337-4>
- Pant, S. B., Thapa, S. B., Howard, J., Ojha, S. P., & Lien, L. (2022). Mental disorders and suicidality among Opioid Agonist Treatment service users in Nepal: A cross sectional study. *SSM - Mental Health*, 2, 100165. <https://doi.org/10.1016/J.SSMMH.2022.100165>
- Pant, S. B., Thapa, S. B., Howard, J., Ojha, S. P., & Lien, L. (2023). Psychological distress and quality of life among Opioid Agonist Treatment service users with a history of injecting and non-injecting drug use: A cross-sectional study in Kathmandu, Nepal. *PLOS ONE*, 18(2), e0281437. <https://doi.org/10.1371/JOURNAL.PONE.0281437>
- Paquette, C. E., Syvertsen, J. L., & Pollini, R. A. (2018). Stigma at Every Turn: Health Services Experiences among People Who Inject Drugs. *The International Journal on Drug Policy*, 57, 104. <https://doi.org/10.1016/J.DRUGPO.2018.04.004>
- Ritsher, J. B., & Phelan, J. C. (2004). Internalized stigma predicts erosion of morale among psychiatric outpatients. *Psychiatry Research*, 129(3), 257–265. <https://doi.org/10.1016/J.PSYCHRES.2004.08.003>
- Ronzani, T. M., Higgins-Biddle, J., & Furtado, E. F. (2009). Stigmatization of alcohol and other drug users by primary care providers in Southeast Brazil. *Social Science &*

- Medicine* (1982), 69(7), 1080–1084. <https://doi.org/10.1016/J.SOCSCIMED.2009.07.026>
- Room, R. (2005). Stigma, social inequality and alcohol and drug use. *Drug and Alcohol Review*, 24(2), 143–155. <https://doi.org/10.1080/09595230500102434>
- Sarkar, S., Balhara, Y. P. S., Kumar, S., Saini, V., Kamran, A., Patil, V., Singh, S., & Gyawali, S. (2017). Internalized stigma among patients with substance use disorders at a tertiary care center in India. *Journal of Ethnicity in Substance Abuse*, 18(3), 345–358. <https://doi.org/10.1080/15332640.2017.1357158>
- Schomerus, G., Lucht, M., Holzinger, A., Matschinger, H., Carta, M. G., & Angermeyer, M. C. (2011). The stigma of alcohol dependence compared with other mental disorders: a review of population studies. *Alcohol and Alcoholism (Oxford, Oxfordshire)*, 46(2), 105–112. <https://doi.org/10.1093/ALCALC/AGQ089>
- Sheehan, D. V., Lecrubier, Y., Sheehan, K. H., Amorim, P., Janavs, J., Weiller, E., Hergueta, T., Baker, R., & Dunbar, G. C. (1998). The Mini-International Neuropsychiatric Interview (M.I.N.I.): The Development and Validation of a Structured Diagnostic Psychiatric Interview for DSM-IV and ICD-10. *The Journal of Clinical Psychiatry*, 59(suppl 20), 11980. <https://www.psychiatrist.com/jcp/neurologic/neurology/mini-international-neuropsychiatric-interview-mini>
- Shrestha, S. (2019). Internalized Stigma, Coping and Social Support with Mental Illness in Manipal Teaching Hospital, Pokhara, Nepal. *Journal of Nepal Health Research Council*, 17(1), 80–84. <https://doi.org/10.33314/JNHRC.2011>
- Stangl, A. L., Earnshaw, V. A., Logie, C. H., Van Brakel, W., Simbayi, L. C., Barré, I., & Dovidio, J. F. (2019). The Health Stigma and Discrimination Framework: A global, crosscutting framework to inform research, intervention development, and policy on health-related stigmas. *BMC Medicine*, 17(1), 1–13. <https://doi.org/10.1186/S12916-019-1271-3/TABLES/1>
- StataCorp. (2021). *Stata Statistical Software: Release 17*. College Station, TX: StataCorp LLC. <https://www.stata.com/>
- Tan, G. T. H., Shahwan, S., Goh, C. M. J., Ong, W. J., Wei, K. C., Verma, S. K., Chong, S. A., & Subramaniam, M. (2020). Mental illness stigma's reasons and determinants (MISReaD) among Singapore's lay public - a qualitative inquiry. *BMC Psychiatry*, 20(1), 1–13. <https://doi.org/10.1186/S12888-020-02823-6/TABLES/3>
- Thornicroft, G., Sunkel, C., Alikhon Aliev, A., Baker, S., Brohan, E., el Chammay, R., Davies, K., Demissie, M., Duncan, J., Fekadu, W., Gronholm, P. C., Guerrero, Z., Gurung, D., Habtamu, K., Hanlon, C., Heim, E., Henderson, C., Hijazi, Z., Hoffman, C., ... Winkler, P. (2022). The Lancet Commission on ending stigma and discrimination in mental health. *Lancet (London, England)*, 400(10361), 1438–1480. [https://doi.org/10.1016/S0140-6736\(22\)01470-2](https://doi.org/10.1016/S0140-6736(22)01470-2)
- Volkow, N. D. (2020). Stigma and the Toll of Addiction. *The New England Journal of Medicine*, 382(14), 1289–1290. <https://doi.org/10.1056/NEJMP1917360>

**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.