



From Within and Beyond: A Comparative Study of Self and Affiliate Stigma in Alcohol Use Disorder

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Abstract

Introduction: Alcohol Use Disorder (AUD) is a widespread medical condition that impacts individuals globally, with significant social, psychological, and health consequences. Both self-stigma and affiliate stigma have been identified as major barriers to treatment and recovery. This study compared levels of self-stigma and affiliate stigma among individuals attending De-addiction centres and those participating in Alcoholics Anonymous (AA) groups.

Methods: A cross-sectional, comparative study utilizing purposive sampling involving 50 dyads of individuals recovering from alcohol dependence and their family members was conducted. Data were collected using standardized scales for self-stigma (Substance Abuse Self-Stigma Scale) and affiliate stigma (Affiliate Stigma Scale). Appropriate statistical tests were applied.

Findings: The results indicate that self-stigma levels were similar across both groups, while affiliate stigma was significantly lower among family members of AA participants. Factors such as age, education, and employment status were found to influence stigma in both groups, with education and employment linked to lower stigma.

Conclusion: The study highlights the persistence of self-stigma despite abstinence and the potential stigma-buffering effect of AA's community-based support model for families. Stigma-reduction strategies such as integrating AA-style peer models into formal treatment, offering family counselling in De-addiction Centres, and launching culturally sensitive public awareness campaigns may improve recovery outcomes.

Keywords: Alcohol use disorder, Self-stigma, Stigma, Substance-related disorders, Alcoholics anonymous

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Introduction

Alcohol Use Disorder (AUD) is a medical condition in which an individual is unable to regulate or cease alcohol intake despite experiencing harmful effects on their physical health, work performance, or social relationships.¹ The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) defines AUD as a spectrum disorder with varying severity. The World Health Organization (WHO) reported that in 2019, an estimated 400 million people aged 15 years and older were living with Alcohol Use Disorders globally. Of these, approximately 209 million individuals were living with alcohol dependence.² That same year, India's National Survey on Extent and Pattern of Substance Use, conducted by the National Drug Dependence Treatment Centre at AIIMS for the Ministry of Social Justice and Empowerment, identified alcohol as the country's most prevalent psychoactive substance. The survey reported that 14.6% of Indians aged 10 to 75 years (approximately

160 million individuals) consume alcohol, with a markedly higher rate among men (27.3%) than women (1.6%), and a 1.3% prevalence in the 10–17-year-old cohort.³

Although the biological and psychological facets of alcohol use disorder (AUD) have been extensively studied, its social and emotional dimensions, especially stigma, remain formidable obstacles to both treatment engagement and sustained recovery.⁴ Stigma manifests in several ways, most notably through self-stigma and affiliate stigma. Self-stigma occurs when individuals internalize societal prejudices, fostering shame, diminished self-worth, and a loss of confidence in their ability to change; in the context of AUD, these feelings can sap motivation and lower adherence to therapeutic regimens.⁵ In contrast, affiliate stigma impacts family members or caregivers who experience secondary stigma due to their association with the individual affected by AUD.⁴ This can lead to blame, social exclusion, and emotional strain. In the Indian sociocultural context, stigma is further magnified by



collectivistic values and traditional joint family structures, where multiple generations cohabit.⁶ Within such settings, caregiving responsibilities often fall on female family members (e.g., mother, wife, sister), leading to emotional exhaustion and social isolation.^{7,8} Concepts like “izzat” (family honour) and societal expectations around morality and reputation add further pressure, especially in households dealing with substance use disorders.

To better understand the dynamics of stigma in recovery, the present study draws on Corrigan and Watson’s (2002) theoretical model of stigma, which delineates public stigma, self-stigma, and affiliate stigma.⁵ This framework emphasizes that stigma operates at multiple levels: Societal, interpersonal, and intrapersonal, and underscores the importance of targeting each domain in recovery interventions. Alcohol use disorder is a major public health concern in India, contributing to physical illness, psychological distress, and social problems. To address this, the government and private sector have established deaddiction centres offering detoxification, counselling, rehabilitation, and relapse prevention. Key institutions include AIIMS’s National Drug Dependence Treatment Centre (NDDTC) and NIMHANS in Bengaluru, supported by state-run Integrated Rehabilitation Centres for Addicts (IRCA). Helplines such as 14446 provide nationwide access to services. The Mental Healthcare Act, 2017, regulates these centres, ensuring patient rights, ethical treatment, and quality standards, while private centres like Sanctum Wellness and Alpha Healing complement public efforts. Individuals recovering from AUD may engage in different forms of treatment. Those receiving care from De-addiction Centres undergo structured, medically supervised programs, but may also face institutional labelling and public stigma. Conversely, Alcoholics Anonymous (AA), a peer-led, community-based support group, offers anonymity and shared lived experiences, which may mitigate stigma and promote long-term recovery.² Despite the availability of both treatment modalities, comparative research examining differences in self-stigma and affiliate stigma across these settings remains scarce. Given the variation in structure, approach, and social interaction between formal treatment and peer support groups, the present study aimed to compare the levels of self-stigma and affiliate stigma among individuals attending De-addiction centres and those participating in AA.

Methods

Study Setting and Participants

A cross-sectional, comparative study design using purposive sampling was implemented to recruit 50 dyads, comprising individuals in recovery from alcohol dependence and one of their family members. Recruitment took place at the outpatient psychiatry department of a tertiary care hospital and Alcoholics Anonymous (AA) meetings in the Delhi NCR region.

Purposive sampling was selected to ensure representation from both De-addiction centres and

AA settings, given accessibility and population-specific contexts. However, this approach may introduce selection bias, potentially over-representing individuals and families more motivated or able to seek treatment. No formal power calculation was performed for the sample size. The small sample size may limit statistical power to detect subtle differences.

Recovering individuals qualified if they were at least 18 years old, had a psychiatrist or AA-confirmed diagnosis of Alcohol Use Disorder, and maintained abstinence for a minimum of one month (as corroborated by family). They also needed to attend the assessment with a family member, comprehend English or Hindi, and provide written informed consent. Family participants defined as a spouse, parent, or child were included if they were 18 or older, had co-resided with the recovering individual for at least 6 months, and consented to participate. Exclusion criteria ruled out anyone with acute medical, surgical, or psychiatric conditions; a history of substance use other than alcohol and tobacco; or an inability to be present with a family member. Tobacco users were included due to cultural normalization and widespread acceptability in India, which may render it less stigmatized than other substances. The influence of tobacco use on stigma perception was acknowledged as a contextual factor. All participants were fully informed about the study objectives and procedures. Written informed consent was obtained in line with ethical protocols. Confidentiality and anonymity were assured. Ethical Approval was obtained from the Institutional Ethics Committee (Ref No. 74 IEC PG-54/27.02.2020, OT-16/22.07.2020, OT-17/27.01.2021).

Tools for Data Collection

Data were collected using self-structured and standardized questionnaires. A data sheet was developed to collect information on socio-demographic and clinical variables of individuals with alcohol dependence and their family members. The Substance Abuse Self-Stigma Scale (SASSS),⁹ which demonstrated strong internal consistency ($\alpha=0.86$), was utilized to assess various dimensions of self-stigma (self-devaluation, enacted stigma, stigma avoidance). The scale ranges from 40 to 200, with scoring based on the total mean, where higher scores indicate greater levels of self-stigma. Similarly, the Affiliate Stigma Scale (ASS),⁴ with a Cronbach’s α exceeding 0.90, was employed to evaluate the internalization of stigma associated with being related to individuals with alcohol dependence. This scale ranges from 22 to 88, with scoring based on the total mean, where higher scores reflect greater levels of affiliate stigma. Both tools were translated into Hindi and back-translated into English to ensure content validity. While formal validation in this study population was not conducted, reliability coefficients supported internal consistency. Future studies should consider pilot validation for the Hindi versions. Additionally, the scales are copyrighted, and authorization for their use was obtained from the respective copyright authors. No

missing data were encountered, as all questionnaires were checked for completeness at the time of administration.

Statistical Analysis

The present study involved data analysis and interpretation to systematically reduce, organize, and derive meaningful insights from the collected data. Statistical analyses were performed using SPSS software (version 26.0; IBM Corp., Armonk, NY, USA). Both descriptive and inferential statistical methods were applied. Descriptive statistics, including percentages, means, and standard deviations, were computed. Chi-square and Student's *t*-tests were used to compare the clinical and demographic characteristics of participants from the De-addiction Centre and Alcoholics Anonymous groups. Additionally, Pearson's correlation, Student's *t*-test, and ANOVA were conducted to examine the association between participants' characteristics and their Self-stigma and Affiliate-stigma scores. All statistical tests were two-tailed, with significance levels set at $P < 0.05$.

Result

Clinical and Demographic Profiles of Persons with AUD and Their Family Members

A comparison of clinical and demographic profiles between individuals from a De-addiction Centre and members of AA groups revealed no statistically significant differences in most variables. The mean

age for the De-addiction Centre group was 41.24 years ($SD = 10.64$), and 43.16 years ($SD = 8.13$) in the AA group ($P = 0.18$). All AUD participants were male. The age of initiation and regular use of alcohol showed no significant differences. Abstinence duration was longer in the AA group (48% abstinent > 1 year vs. 28% in the De-addiction group), though it was not statistically significant ($P = 0.29$) (Table 1).

The mean age of family members was almost identical in both groups (41.24 years vs. 41.84 years, $P = 0.59$). Most family members were female (72% in the De-addiction Centre group vs. 88% in the AA group, $P = 0.15$) (Table 2).

Self-Stigma and Affiliate Stigma Among Participants

The overall self-stigma scores did not differ significantly between the De-addiction Centre and AA groups, with scores of 114.64 ($SD = 17.51$) and 114.48 ($SD = 18.03$), respectively ($P = 0.965$). These results suggest that individuals from both groups internalize comparable levels of stigma despite differences in treatment settings.

However, affiliate stigma scores were notably lower among the AA group, 51.00 ($SD = 13.81$), compared to the De-addiction Centre group, 56.88 ($SD = 14.23$), a statistically significant difference with a *P*-value of 0.04. This indicates that family members of AA attendees may feel less stigmatized, possibly due to the supportive community structure of AA (Table 3, Figure 1).

Table 1. Comparison of Clinical and Demographic Characteristics of Persons with Alcohol Use Disorder from De-addiction Centre and Alcoholics Anonymous ($n_1 = 50$)

Variables		Total Sample ($n = 50$) n (%) *Mean (SD)	De-addiction Centre ($n = 25$) n (%) *Mean (SD)	Alcoholics Anonymous ($n = 25$) n (%) *Mean (SD)	<i>P</i> -value
Age (years)		*42.21 (9.43)	*41.24 (10.64)	*43.16 (8.13)	0.18 ^a
Education	Intermediate and above	16 (32)	11 (44)	5 (20)	0.21 ^b
	High school	19 (38)	8 (32)	11 (44)	
	Below high school	15 (30)	6 (24)	9 (36)	
Employment status	Employed	17 (34)	8 (32)	9 (36)	0.59 ^b
	Unemployed	33 (66)	17 (68)	16 (64)	
Marital status	Married	40 (80)	18 (72)	22 (88)	0.55 ^b
	Unmarried	7 (14)	5 (20)	2 (8)	
	Divorced/Separated	1 (2)	1 (4)	0	
Type of family	Nuclear	30 (60)	15 (60)	15 (60)	0.90 ^b
	Extended	9 (18)	4 (16)	5 (20)	
	Joint	11 (22)	6 (24)	5 (20)	
Religion	Hindu	48 (96)	23 (92)	25 (100)	0.15 ^b
	Islam	2 (4)	2 (8)	0	
Age at initiation of alcohol use		*19.33 (5.02)	*19.96 (4.61)	*18.68 (5.39)	0.66 ^a
Age at Regular use of alcohol		*27.67 (6.86)	*27.80 (6.56)	*27.56 (7.29)	0.42 ^a
Current duration of alcohol abstinence	> 1 month - ≤ 1 year	31 (62)	18 (72)	13 (52)	0.29 ^b
	≥ 1 year	19 (38)	7 (28)	12 (48)	
Tobacco use	Dependence on current use	31 (62)	13 (52)	18 (72)	0.67 ^b
	Dependence with currently abstinent	14 (28)	9 (36)	5 (20)	
	Never used	5 (10)	3 (12)	2 (8)	

Note: SD: Standard Deviation, a: Independent *t*-test, b: Chi-squared test.

Table 2. Comparison of Clinical and Demographic Characteristics of Family Members from De-addiction Centre and Alcoholics Anonymous $n_2 = 50$

Variables		Total Sample n (%) *Mean (SD)	De-addiction Centre n (%) *Mean (SD)	Alcoholics Anonymous n (%) *Mean (SD)	P-value
Age (years)		*41.53 (12.25)	*41.24 (11.51)	*41.84 (13.19)	0.59 ^a
Gender	Male	10 (20)	7 (28)	3 (12)	0.15 ^b
	Female	40 (80)	18 (72)	22 (88)	
Education	Graduate or higher	16 (32)	9 (36)	7 (28)	0.93 ^b
	Intermediate	19 (38)	9 (36)	10 (40)	
	High school	9 (18)	4 (16)	5 (20)	
	Below high school	6 (12)	3 (12)	3 (12)	
Type of family	Nuclear	30 (60)	15 (60)	15 (60)	0.90 ^b
	Extended	9 (18)	4 (16)	5 (20)	
	Joint	11 (22)	6 (24)	5 (20)	
Religion	Hindu	48 (96)	23 (92)	25 (100)	0.15 ^b
	Islam	2 (4)	2 (8)	0	
Relationship with the person taking treatment	Father	8 (16)	5 (20)	3 (12)	0.45 ^b
	Mother	3 (6)	2 (8)	1 (4)	
	Wife	32 (64)	15 (60)	17 (68)	
	Others	7 (14)	3 (12)	4 (16)	
Employment status	Employed	35 (70)	17 (68)	18 (72)	0.52 ^b
	Unemployed	14 (28)	8 (32)	6 (24)	
Marital status	Married	39 (78)	20 (80)	19 (76)	0.89 ^b
	Unmarried	5 (10)	2 (8)	3 (12)	
	Widow/widower	6 (12)	3 (12)	3 (12)	
For how long the family member is staying with the person taking treatment (in years)		*22.03 (10.34)	*22.08 (10.12)	*21.96 (10.71)	0.63 ^a
Substance use history	Yes	8 (16)	5 (20)	3 (12)	0.44 ^b
	No	42 (84)	20 (80)	22 (88)	

Note: SD: Standard Deviation, a: Independent t-test, b: Chi-squared test.

Table 3. Comparison of Self-Stigma and Affiliate Stigma between De-addiction Centre and Alcoholics Anonymous $n_1 = 100$

	De-addiction Centre (Mean ± SD) n = 50	Alcoholics Anonymous (Mean ± SD) n = 50	t-value	P value
SS 1 (Self-devaluation)	21.24 ± 5.94	23.72 ± 5.34	1.35	0.13
SS 2 (Enacted stigma)	29.36 ± 6.20	26.48 ± 6.63	0.07	0.12
SS 3 (Stigma avoidance & value disengagement)	64.04 ± 8.92	64.28 ± 5.33	0.09	0.91
Self-Stigma Total	114.64 ± 12.44	114.48 ± 13.29	0.53	0.96
Affiliate stigma	56.88 ± 14.23	51 ± 13.81	6.17	0.04*

Note: * P-value ≤ 0.05, t-value: Student's t-test.

Stigma and Demographic/Clinical Characteristics

Table 4 compares self-stigma among individuals in a De-addiction Centre and Alcoholics Anonymous (AA) based on various demographic and clinical factors. In the De-addiction group, age was significantly associated with self-devaluation ($r = 0.33$; $P = 0.05$) but had no impact on other stigma domains. Similarly, in the AA group, age had a notable effect on enacted stigma ($r = 0.21$; $P = 0.04$), indicating that older individuals might perceive themselves more negatively. Individuals with higher education (Intermediate & above) in the De-addiction Centre group exhibited significantly lower self-devaluation and stigma avoidance scores ($P \leq 0.05$) than those with lower education. However, education was not

a key factor in self-stigma within the AA group, except for total stigma scores ($P = 0.05$). In the AA group, marital status significantly influenced stigma avoidance ($P = 0.04$), suggesting that unmarried individuals were more likely to avoid situations where they might experience stigma. However, in the De-addiction Centre group, marital status did not have a significant impact on self-stigma. While nuclear family members in both groups had the highest self-stigma scores, the differences were not statistically significant ($P > 0.05$). However, joint family members in the AA group had higher enacted stigma scores (32.41 ± 5.05) than those from other family structures.

Individuals who had maintained sobriety for over a year had higher self-stigma scores in both groups, but

Table 4. Association of Self- Stigma Scores and Participants' Characteristics in De-addiction and Alcoholics Anonymous Groups ($n=n_1+n_2=50$)

Variables		De-addiction Centre				Alcoholics Anonymous			
		Self-devaluation (Mean $\pm$ SD)	Enacted stigma (Mean $\pm$ SD)	Stigma avoidance & value disengagement (Mean $\pm$ SD)	Self-Stigma Total (Mean $\pm$ SD)	Self-devaluation (Mean $\pm$ SD)	Enacted stigma (Mean $\pm$ SD)	Stigma avoidance & value disengagement (Mean $\pm$ SD)	Self-Stigma Total (Mean $\pm$ SD)
Age	r (p)	+0.33 (0.05*)	+0.01 (0.67)	+0.11 (0.12)	-0.06 (0.23)	+0.03 (0.12)	+0.21 (0.04*)	-0.02 (0.09)	+0.14 (0.07)
Education	Intermediate and above	21.01 (5.52)	27.68 (5.03)	61.44 (9.02)	110.73 (10.58)	17.01 (4.32)	25.58 (2.13)	60.42 (7.10)	110.93 (09.78)
	High school	21.30 (6.87)	26.81 (6.83)	63.10 (3.40)	110.40 (15.78)	22.11 (5.82)	24.22 (6.83)	61.11 (2.73)	114.20 (11.38)
	Below high school	17.52 (7.77)	22.53 (1.61)	63.30 (4.53)	108.50 (11.02)	21.32 (5.27)	24.33 (3.62)	62.27 (7.50)	110.31 (13.11)
	P-value	0.01*	0.05*	0.01*	0.05*	0.56	0.23	0.14	0.05*
Employment status	Employed	20.50 (5.83)	30.50 (8.05)	62.25 (11.56)	113.25 (12.78)	18.28 (7.33)	26.51 (5.25)	60.65 (9.26)	116.85 (10.18)
	Unemployed	21.59 (6.13)	28.82 (5.33)	64.88 (7.66)	115.29 (12.61)	20.49 (5.03)	29.52 (6.23)	65.28 (6.96)	112.89 (10.01)
	P-value	0.67	0.54	0.05*	0.71	0.15	0.39	0.21	0.19
Marital status	Married	21.83 (6.75)	28.56 (6.69)	62.83 (9.36)	113.22 (13.49)	21.30 (4.75)	29.46 (7.60)	64.03 (9.06)	113.42 (9.29)
	Unmarried	17.80 (5.92)	27.26 (4.91)	65.18 (4.53)	110.18 (10.67)	23.80 (3.72)	26.22 (5.90)	62.58 (8.23)	116.28 (07.67)
	Widowed/widower	18.91 (7.72)	30.37 (2.01)	64.27 (5.68)	117.28 (9.54)	20.41 (6.77)	29.17 (2.34)	60.47 (7.08)	112.08 (8.64)
	P-value	0.75	0.62	0.57	0.55	0.19	0.28	0.04*	0.20
Type of family	Nuclear	21.67 (5.28)	28.06 (6.85)	66.67 (6.04)	116.40 (12.74)	20.87 (6.48)	26.26 (6.05)	62.97 (3.24)	115.42 (05.17)
	Extended	20.51 (5.69)	32.51 (3.11)	57.74 (17.21)	110.75 (11.35)	20.92 (7.39)	30.21 (4.41)	59.24 (8.81)	114.25 (07.25)
	Joint	20.67 (8.38)	30.51 (5.75)	61.67 (5.66)	112.83 (13.63)	22.37 (6.34)	32.41 (5.05)	63.27 (2.26)	110.23 (10.03)
	P-value	0.91	0.41	0.16	0.68	0.24	0.21	1.62	1.06
Religion	Hindu	21.43 (6.15)	29.35 (6.48)	64.31 (8.86)	115.08 (12.57)	19.23 (4.55)	30.05 (4.38)	61.33 (4.26)	114.18 (10.27)
	Islam	19.01 (1.41)	29.51 (0.71)	61.01 (12.72)	109.51 (13.43)	20.52 (4.31)	30.01 (2.31)	60.04 (9.22)	112.21 (10.23)
	P-value	0.58	0.97	0.63	0.55	0.12	0.90	0.54	0.55
Current duration of alcohol abstinence	> 1 month - $\leq$ 1 year	22.17 (6.67)	28.22 (6.76)	64.39 (9.42)	114.78 (13.83)	21.27 (7.62)	29.02 (5.26)	64.29 (7.22)	115.28 (05.63)
	$\geq$ 1 year	19.33 (2.16)	32.17 (3.54)	64.50 (7.94)	116.89 (8.19)	17.34 (3.11)	31.27 (4.34)	61.52 (5.44)	114.09 (7.09)
	P-value	0.05*	0.66	0.45	0.67	0.12	1.67	0.05*	0.67
Tobacco use	Dependence on current use	20.61 (5.52)	29.78 (5.73)	63.44 (10.02)	113.83 (11.58)	21.91 (7.22)	30.28 (4.23)	63.64 (8.22)	113.23 (07.78)
	Dependence with currently abstinent	24.60 (6.87)	29.80 (8.84)	66.00 (6.40)	120.40 (15.88)	22.63 (6.07)	28.23 (6.24)	64.71 (7.43)	118.56 (08.28)
	Never used	18.50 (7.77)	24.50 (0.71)	64.50 (3.53)	107.50 (12.02)	19.54 (5.71)	25.51 (0.71)	62.78 (6.76)	110.55 (08.62)
	P-value	0.54	0.65	0.45	0.77	1.64	0.25	0.95	1.27

Note: * P -value ≤ 0.05 .

the difference was statistically significant only for self-devaluation in the De-addiction Centre and Stigma avoidance & value disengagement in AA groups ($P=0.05$).

Table 5 examines affiliate stigma (stigma experienced by family members) about demographic and clinical factors across the De-addiction Centre and AA groups. Age was significantly linked to affiliate stigma in both groups ($r=0.29$; $P=0.05$ for De-addiction Centre, $r=0.36$; $P=0.01$ for AA), suggesting that older family members might experience different levels of stigma. Among De-addiction Centre family members, those with higher

education (Intermediate & above) reported significantly lower stigma ($M=48.62$, $SD=11.69$; $P=0.04$) compared to those with lower education levels. Employment was a key factor in the AA group, where unemployed individuals had significantly higher affiliate stigma ($M=57.01$ vs. 52.88 ; $P=0.01$). Family structure also played a role, with nuclear family members reporting lower affiliate stigma ($P=0.05$ for De-addiction Centre, $P=0.04$ for AA) than those in joint or extended families. Lastly, family members with a history of substance use in the AA group reported significantly lower affiliate stigma ($P=0.03$) than those without such a history, while in the De-addiction Centre group, this association was not significant ($P=0.48$).

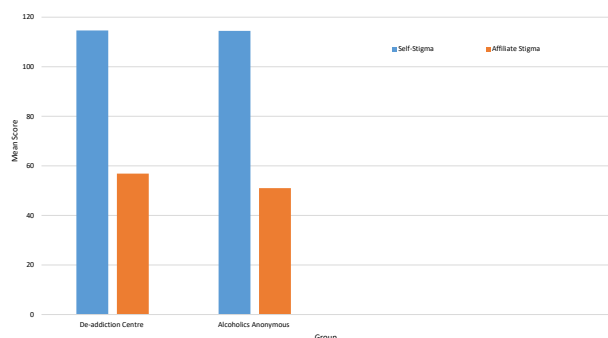


Figure 1. Comparison of Self-stigma and Affiliate stigma between the De-addiction Centre and AA groups

Discussion

The findings of this study indicated no significant difference in self-stigma levels between participants from both groups, with both exhibiting moderate self-stigma. This suggests that individuals experience similar degrees of self-stigma regardless of the treatment setting.

When examining affiliate stigma among family members, those connected to the de-addiction centre reported higher stigma than those associated with AA group members. This may be attributed to the supportive and community-driven nature of AA, which could reduce feelings of stigma among families. Regarding

Table 5. Association of Affiliate Stigma Scores and Participants Characteristics in De-addiction and Alcoholics Anonymous Groups ($n=n_1+n_2=50$)

Variables		De-addiction Centre		Alcoholics Anonymous	
		Affiliate Stigma (Mean $\pm$ SD) (r^2)	P-value	Affiliate Stigma (Mean $\pm$ SD) (r^2)	P-value
Age		+0.24 [*]	0.05 [*]	+0.41 [*]	0.01 [*]
Gender	Male	54.08 (11.68)	0.05 [*]	50.39 (11.18)	0.15
	Female	58.31 (9.07)		49.28 (14.56)	
Education	Intermediate and above	48.62 (11.69)	0.04 [*]	53.78 (12.53)	0.31
	High school	51.11 (07.57)		50.27 (11.56)	
	Below high school	52.28 (10.87)		57.51 (15.58)	
Employment status	Employed	53.94 (13.07)	0.56	52.88 (14.92)	0.01 [*]
	Unemployed	47.50 (16.47)		57.01 (10.87)	
Marital status	Married	51.95 (14.35)	0.14	55.50 (13.59)	0.12
	Unmarried	52.00 (24.01)		49.50 (13.43)	
	Widow/widower	51.33 (13.57)		63.67 (17.61)	
Type of family	Nuclear	49.87 (07.46)	0.05 [*]	52.56 (11.98)	0.04 [*]
	Extended	50.32 (09.78)		54.23 (43.23)	
	Joint	55.01 (08.18)		58.32 (21.28)	
Religion	Hindu	53.46 (11.10)	0.28	56.26 (05.28)	0.76
	Islam	50.12 (12.01)		53.45 (07.48)	
Relationship with the person taking treatment	Father	48.28 (12.89)	0.67	54.23 (12.28)	0.23
	Mother	57.23 (10.78)		58.56 (11.78)	
	Wife	52.45 (08.35)		52.29 (10.19)	
	Others	55.78 (11.06)		50.23 (11.06)	
For how long a family member is staying with the person taking treatment (in years)		50.11 (12.06)	0.21	53.56 (11.06)	0.45
Substance use history	Yes	53.29 (13.64)	0.48	51.67 (14.16)	0.03 [*]
	No	48.87 (15.93)		56.26 (12.24)	

Note: ^{*} P -value ≤ 0.05 .

self-stigma, individual factors such as age and education had a significant influence on stigma in both groups. In terms of affiliate stigma, variables such as age and family structure (nuclear, joint, or extended) were relevant. Previous research¹¹ has suggested a relationship between higher self-stigma and increased alcohol use severity and consequences. Consistent with this result, the present study showed that self-stigma is correlated with the duration of abstinence from alcohol. Specifically, individuals from De-addiction centres who had been abstinent for less than a year experienced greater self-devaluation. In contrast, AA group members exhibited stigma avoidance and value disengagement, although overall self-stigma scores were not significantly different between groups. This suggests that longer abstinence does not necessarily lead to reduced self-stigma.

This study observed that older participants in the De-addiction group showed greater self-devaluation, and those in the AA group experienced more enacted stigma. Living with a spouse and children was also linked to reduced self-stigma. Consistent with these findings, a systematic review¹¹ highlighted that individuals with Alcohol Use Disorder (AUD) often face structural discrimination, as society tends to view them as personally responsible for their condition. This societal judgment fosters rejection and negative emotions. Other studies^{12,13} have shown that public stigma, involving stereotypes, prejudice, and discrimination, contributes to internalized negative self-perceptions and may perpetuate harmful drinking behaviours. Participants from nuclear families reported higher self-devaluation in the De-addiction group, though the difference wasn't statistically significant. This aligns with the findings from another study¹⁴. Another finding of the present study is that participants from both groups who were less educated or unemployed experienced higher self-stigma compared to those with higher education and employment. This is likely due to socioeconomic challenges, dependence on others, and their marginal position in society, which can lead to greater social rejection and internalized stigma.^{15–17} Additionally, a research¹⁸ indicated that individuals with education beyond the 12th grade experienced more self-stigma.

The present study found that married participants in the AA group displayed higher levels of stigma avoidance and value disengagement, though the overall self-stigma score was not significantly different. In line with this, another study¹⁷ found that previously married individuals experienced more stigma than those who had never married. The present study found that caregivers with a personal history of substance use had lower affiliate stigma, particularly in the AA group. This suggests that personal experience with AUD can foster empathy and reduce stigma. Similarly, a systematic review¹⁹ showed that people with AUD are more stigmatized, perceived as more dangerous, and face more discrimination than those with other substance use or mental disorders. Another study¹⁷ noted that stigma in the general

population is influenced by educational background, but those with close contact (e.g., a relative with AUD) tend to show less stigma. The present study found that female caregivers from the De-addiction group reported significantly higher affiliate stigma. This could be due to limited access to treatment resources and a sense of being trapped in the caregiving role, making it particularly challenging. Various studies^{20–23} have pointed out the heavy burden of caregiving, especially for women, which includes financial stress, family conflict, disruption of daily life, mental health decline, and domestic violence. Furthermore, the study found that affiliate stigma among caregivers increased with increasing age. This aligns with the findings from previous studies,^{24,25} likely reflecting the cumulative effects of long-term caregiving, greater exposure to stigma, and resulting psychological strain and reduced quality of life.

Limitations

This study has several limitations that should be considered when interpreting the findings. First, the relatively small sample size ($n=50$ dyads) and use of non-random purposive sampling limit both the generalizability and the statistical power of this comparative analysis, and the findings should, therefore, be interpreted as exploratory. Second, the cross-sectional design restricts the ability to infer causal relationships or observe stigma trajectories over time. Third, the study relied on self-reported abstinence, verified only through family members, which could introduce recall or social desirability bias. Fourth, the sample included only male individuals with AUD, excluding women and thereby overlooking gender-specific stigma dynamics. Fifth, the study was conducted in a single geographic region (Delhi NCR), which may limit applicability to other sociocultural contexts. Lastly, although the stigma scales were translated into Hindi and showed good internal consistency, formal validation of the translated tools in this population was not performed, which may affect measurement precision.

Conclusion

This study highlights the persistence of self-stigma and the variation in affiliate stigma among individuals with Alcohol Use Disorder (AUD) and their families, comparing those treated at De-addiction centres with participants in Alcoholics Anonymous (AA). Despite abstinence, self-stigma remained similar across both groups, indicating internalized stigma is not easily resolved. In contrast, affiliate stigma was significantly lower among AA family members, suggesting a protective effect from AA's supportive, anonymous, and peer-driven structure. Key demographic factors such as age, education, employment, and family structure influenced stigma. Higher education and employment were linked to reduced stigma, while older age and caregiving in joint families, especially by women, contributed to elevated levels of affiliate stigma. These findings reflect broader Indian cultural dynamics, including collectivist values and

concerns about family honour (izzat). To address stigma, the study recommends integrating peer-support elements of AA into formal treatment, offering family counselling in De-addiction centres, and promoting public education campaigns tailored to local contexts. Future research should include women, adopt longitudinal designs, and expand across multiple centres for broader applicability. Reducing both self and affiliate stigma is essential to supporting recovery and improving family well-being.

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Availability of Data and Materials

The data that support the findings of this study are available upon request from the corresponding author. The data are not publicly available because of privacy or ethical restrictions.

Competing Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical Approval

Ethical approval for this study was obtained from the Institutional Ethics Committee (Ref No. 74 IEC PG-54/27.02.2020, OT-16/22.07.2020, OT-17/27.01.2021). All participants voluntarily signed an informed consent form after fully understanding the purpose, methods, potential risks, and possible benefits of the study.

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