A Descriptive Study to Assess the Level of Motivation and the Severity of Dependence among Patients with Alcohol Dependence Syndrome

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Abstract: *Background: level of motivation to change influences the severity of alcohol dependence. The study intended to assess motivation to reduce alcohol consumption in increasing and higher-risk drinkers with objectives to assess the severity of dependence and the level of motivation, to determine the relationship between the variables and to find the association between motivation and severity of dependence with selected socio-demographic and clinical variables of patients with Alcohol Dependence Syndrome. Two hundred patients with alcohol dependence syndrome attending outpatient and inpatient services at Department of Psychiatry of a super speciality hospital at Vellore, India were examined for readiness to change using URICA scale and the severity of alcohol dependence using SADQ questionnaire. Results: There was no correlation between level of motivation and severity of alcohol dependence wherein there was significant association between the dependent and independent variable of the study. Conclusion: There are several factors that contribute to the severity of alcohol dependence and various factors that influence the level of motivation in patients with alcohol dependence syndrome. Treating psychiatric team must be aware of these factors in order to enhance the overall functionality of patients with alcohol dependence syndrome.*

Keywords: Alcohol Dependence Syndrome, Level of motivation, Severity of Dependence, URICA, SADQ

1. Introduction

Alcohol is the commonly used psychoactive substance leading to significant disability and death globally.

Rathod states in his study (Rathod et al., 2015) that 13.3% of his study subjects had consumed alcohol the past year and he highlights that there is a need for effective identification and treatment of adults with Alcohol Use Disorders. (DiClemente et al., 1999) Motivation plays an important role in the management of alcohol dependence syndrome (ADS) by influencing the patients to seek and follow to treatment as well as make effective long-term changes. Motivation refers to the driving force that results in behaviour directed toward particular goals. Prochaska and DiClemente's "transtheoretical model" proposed that motivation is a dynamic process consisting of five stages, Pre-contemplation (PC), Contemplation, Preparation, Action and Maintenance namely. Unfortunately most of the patients who seek treatment in the outpatient department either do not have motivation or vary in the readiness to change.

Severity of dependence indicates the patient consumes large amounts or has a pattern of alcohol intake that impairs the patient's functionality. Dependence could be either psychological or physical (Popham, 1970). The pattern of use and degree or type of dependence these patients are currently at matters, in planning interventions to motivate them to sober alcohol and in the process of treatment of the same. Decreased motivation and high degree of dependence result in relapse ending the patient to suffer more complications.

Objectives
a) To assess the severity of dependence of patients with Alcohol Dependence Syndrome.
b) To assess the level of motivation of patients with Alcohol Dependence Syndrome.
c) To determine the relationship between motivation and severity of dependence in patients with Alcohol Dependence Syndrome.
d) To find the association between motivation and severity of dependence with selected socio-demographic and clinical variables of patients with Alcohol Dependence Syndrome.

2. Methods / Approach

Design: A descriptive design

Sampling technique: Consecutive sampling technique

Sample size: 200 adults who were diagnosed with Alcohol Dependence Syndrome

Setting: The study was conducted in the Department of Psychiatry at a super speciality hospital at Vellore, India.

Tools used: University of Rhode Island Change Assessment (URICA) scale and Severity of Alcohol Dependence Questionnaire (SADQ).

Inclusion criteria:
Samples who fulfilled the inclusion criteria were recruited for the study.
1) Patients with ICD-10 diagnosis of Alcohol Dependence Syndrome
2) Inpatients and Outpatients with a history of or currently suffering from relapse/recurrence of symptoms Alcohol Dependence Syndrome due to any cause.
3) Patients who do not have any complications of alcohol use like Delirium Tremens, korsakoff's psychosis and acute withdrawal, acute intoxication

Exclusion criteria:
1) Patients who are below 18 years of age
2) Patients who have difficulty in comprehension and writing
3) Patients who have acute illness /Alcohol induced psychosis

Data analysis: Data entry and analysis was done using Statistical Packing for Social Studies (SPSS) version 17.0
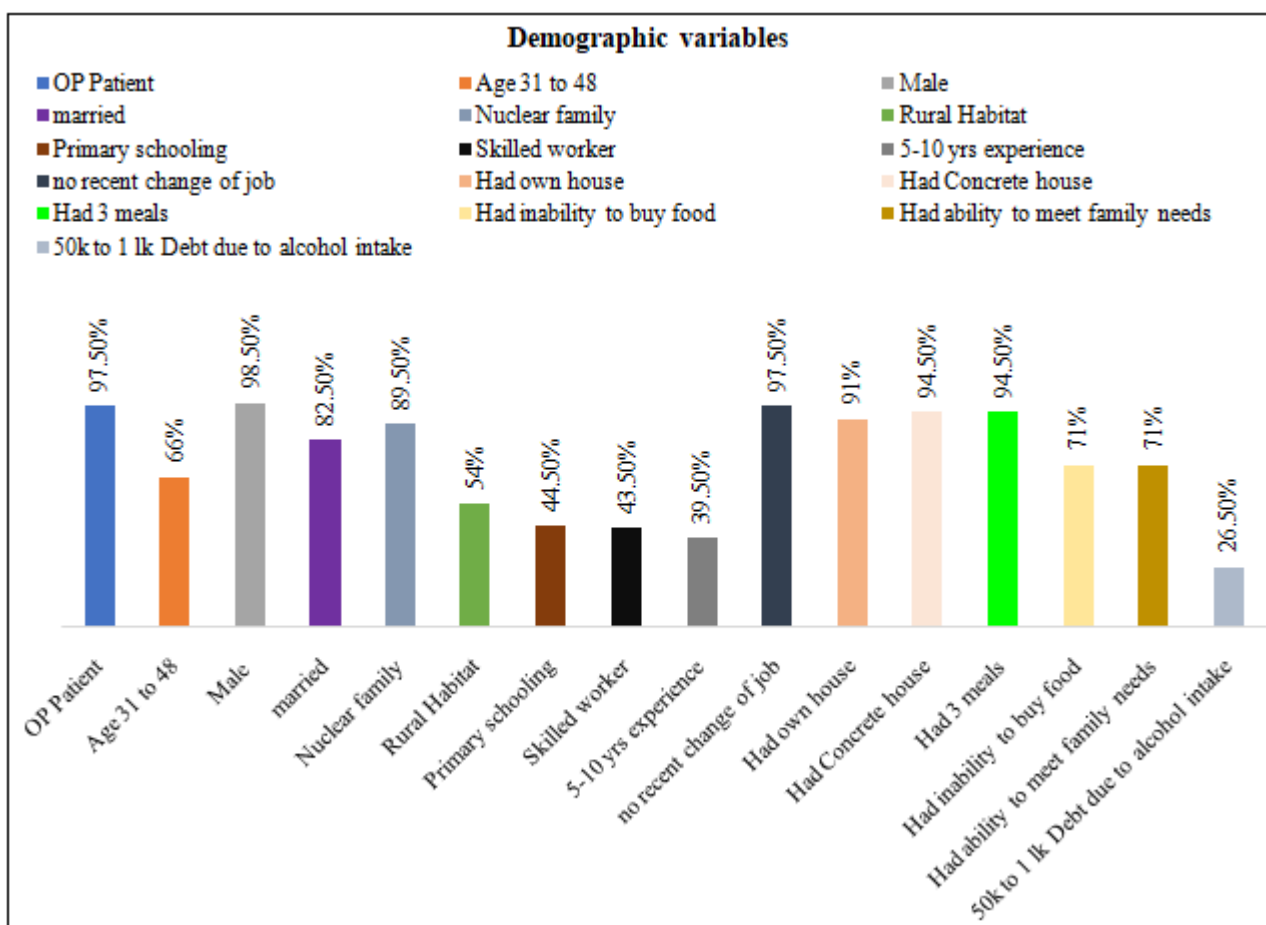
3. Result

Figure 1

Figure 1 shows that majority (97.5%) of the subjects were from outpatient department, 66% of the subjects were within 31 to 48 years, 98.5% of them were men, 82.5% of them were married, 89.5% of them lived in a nuclear family, nearly half of them (54%) were from rural background, less than half of them (44.5%) of them had only primary schooling, 43.5% of them were employed in skilled jobs, 39.5% of them were currently in their jobs for 5 to 10 years, almost all of them (97.5%) had no frequent change of job, 91% of them had their own house, 94.5% of them lived in concreted houses, 94.5% of them were able to have all 3 meals per day, 71% of them had inability to buy food for their family and were unable to meet the needs of their family, only 26.5% of them had debts of around Rs. 50, 000 to 1 lakh.
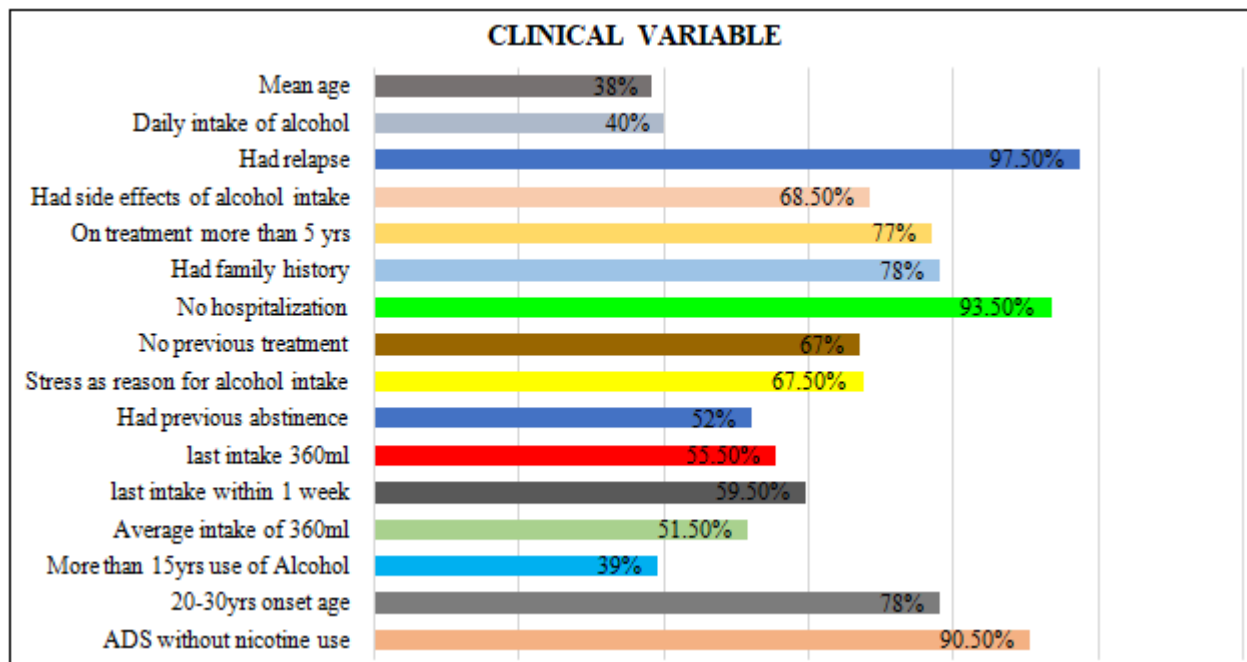
Figure 2

Figure 2 shows that 90.5% of them had been diagnosed with Alcohol Dependence Syndrome without nicotine use, 78% of them had onset of illness at 20 to 30 years, 39% of them have been abusing alcohol for more than 15 years, 51.5% of them have been consuming nearly 760ml of alcohol daily, 59.5% of them had their last intake of alcohol 1 week ago, for 55.5% of them their last intake was 360ml of alcohol, 52% of them at least had one episode of abstinence, 47.5% of them had no relapse thus far, for 67.5% of them the reason for relapse was stress, 78.5% of them had no smoking habit and 92% of them had no nicotine use, 67% of them had no previous treatment, 93.5% of them had never been hospitalized before for alcohol abuse, 78% of them had no family history of alcohol abuse, 99% of them did not have Diabetes Mellitus, 98% of them did not have Hypertension, 80% of them had no history of epigastric pain, nearly 95% of them had no other medical co-morbidities, 77% of them were on treatment for more than 5 years, 68.5% of them had side effects of alcohol consumption, 87.5% of them were on irregular treatment, 40% of them took alcohol every day, for 31.5% of them heavy drinking was in the month of June, 99% of them had been drinking heavily in the year 2021
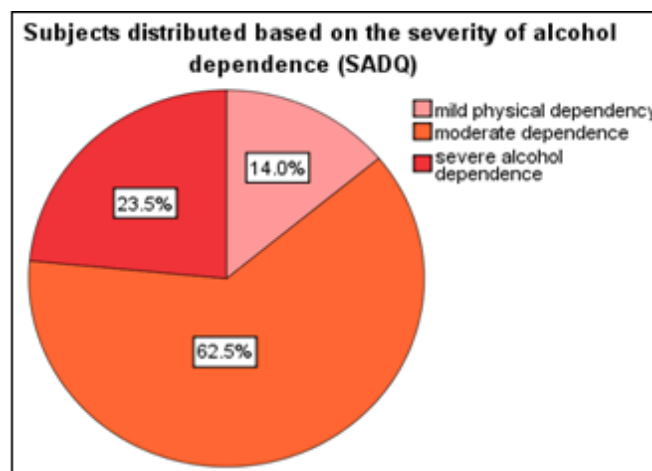

Figure 3

Figure 3 shows that 23.5% of the subjects had severe alcohol dependency
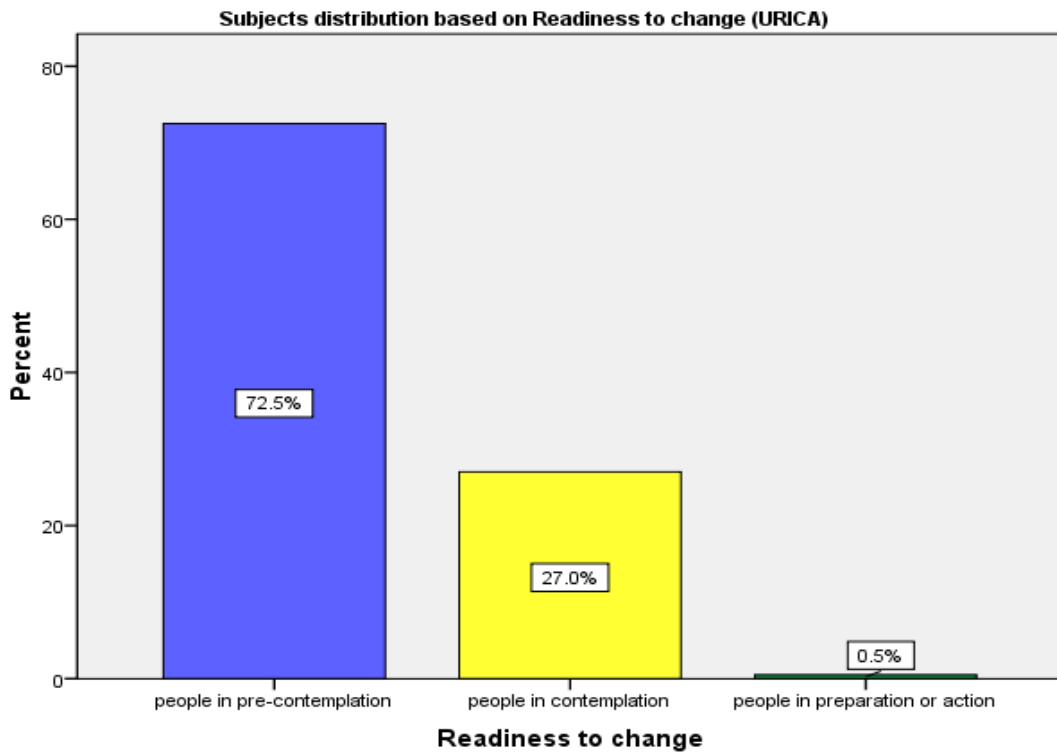
Figure 4

Figure 4 shows that only 0.5% of the subjects were in preparation or action and majority of subjects (72.5%) were in pre-contemplation phase of readiness to change

Figure 5
Correlation between level of motivation (readiness to change) and severity of alcohol dependence

Figure 5 shows that there is negative correlation between level of motivation (readiness to change) and severity of alcohol dependence.

Table 1 shows that there was weak correlation between readiness to change and severity of alcohol dependence and it had no significance indicating that however motivated the subject was, it had no significance in his severity of alcohol dependence

Table 1

Variables	r value	p value
Readiness to change		
Severity of Alcohol Dependence	0.012	0.864

Table 2: Association between demographic variables and severity of alcohol dependence

Demographic variable	Severity of dependence			Total	P value
	Mild	Moderate	Severe		
Habitat					
Urban	10	53	29	92	
Rural	18	72	18	108	
Total	28	125	47	200	0.039*
Occupation					
Unemployed	1	18	6	25	
Unskilled	11	41	20	72	
Skilled	16	58	13	87	
Professional	0	8	8	16	
Total	28	125	47	200	0.023*
House					
Own	27	117	38	182	
Rent	1	8	9	18	
Total	28	125	47	200	0.019**
Type of house					
Concrete	26	122	41	189	
Tiled	1	3	5	9	
Thatched	1	0	1	2	
Total	28	125	47	200	0.054*
Amount of debt due to alcohol use					
Nil	4	38	14	56	
₹ 1001 to ₹ 10,000	2	4	0	6	
₹ 10, 001 to ₹ 50,000	1	16	8	25	
₹ 50, 001 to ₹ 1 lakh	18	27	8	53	
>₹ 1 lakh	3	40	17	60	
Total	28	125	47	200	0.000*

Table 2 shows that there is association between severity of alcohol dependence and habitat, occupation, house, type of house and amount of debt due to alcohol use

Table 3: Association between clinical variables and severity of alcohol dependence

Clinical Variable	Severity of dependence			Total	p value
	Mild	Moderate	Severe		
Diagnosis					
ADS with Nicotine use	2	6	11	19	0.001***
ADS without Nicotine use	26	119	36	181	
Total	28	125	47	200	
Duration of use of alcohol					
1 to 2 years	0	3	3	6	
3 to 10 years	11	39	26	76	0.010***
11 to 15 years	8	23	9	40	
more than 15 years	9	60	9	78	
Total	28	125	47	200	
Last intake of alcohol					
1 week ago	17	78	24	119	
2 weeks ago	10	42	12	64	
3 weeks ago	0	1	5	6	0.011***
1 month ago	1	3	5	9	
more than 1 month	0	1	1	2	
Total	28	125	47	200	
Smoking					
Yes	4	23	16	43	0.051*
No	24	102	31	157	
Total	28	125	47	200	
Nicotine usage					
Yes	0	5	11	16	0.000***
No	28	120	36	184	
Total	28	125	47	200	
No. of. Hospital Stay					
Nil	28	121	38	187	
1	0	3	7	10	0.007***
2	0	1	1	2	
3	0	0	1	1	

Total	28	125	47	200	
On other medication for co-morbidity					
Yes	0	4	6	10	0.016**
No	28	121	41	190	
Total	28	125	47	200	
Started treatment for Alcohol use					
1 to 5 years	6	23	17	46	0.047*
more than 5 years	22	102	30	154	
Total	28	125	47	200	
Side effects					
Present	15	98	24	137	0.001***
Absent	13	27	23	63	
Total	28	125	47	200	
Heavy drinking month					
January	0	2	1	3	
February	2	3	3	8	
March	0	3	7	10	
April	2	2	4	8	
May	6	15	4	25	
June	11	38	14	63	0.010**
July	4	41	7	52	
August	1	15	5	21	
September	2	6	1	9	
December	0	0	1	1	
Total	28	125	47	200	
Heavy drinking year					
2020	0	0	2	2	
2021	28	125	45	198	0.037*
Total	28	125	47	200	

Table 3 shows that there is significant association between severity of alcohol dependence with the diagnosis, duration of alcohol use, duration of last intake of alcohol, smoking and nicotine use, number of hospital stay, family history of alcohol use, other medication taken for co-morbidities, duration of starting treatment for alcohol, side effects caused by alcohol intake, heavy drinking month and heavy drinking year.

Table 4: Association between demographic variables and readiness to change

Demographic variables	Readiness to change			Total	p value
	In pre-contemplation	In contemplation	In preparation or action		
Age range					
19-30	23	15	0	38	
31-48	99	33	0	132	
49-60	16	6	1	23	0.034*
61<	7	0	0	7	
Total	145	54	1	200	

Table 4 shows that there was significant association between age of the subject and their readiness to change

Table 5: Association between clinical variables and readiness to change

Clinical Variable	Readiness to change			Total	p value
	In pre-contemplation	In contemplation	In preparation or action		
Amount of last intake					
180ml (1quarter)	43	31	1	75	
360ml (2quarter)	93	18	0	111	
540ml (3quarter)	8	4	0	12	
720ml (4quarter)	1	0	0	1	
more than 720ml (4quarter)	0	1	0	1	
Total	145	54	1	200	0.011***
1 to 5 years	31	15	0	46	
more than 5 years	114	39	1	154	
Total	145	54	1	200	
Side effects caused by alcohol intake					
Present	114	23	0	137	
Absent	31	31	1	63	0.000***
Total	145	54	1	200	
On regular treatment					0.014**
Yes	15	9	1	25	

| No | 130 | 45 | 0 | 175 | |
| Total | 145 | 54 | 1 | 200 | |

Table 5 shows that there were significant association between readiness to change and amount of last intake, side effects caused by alcohol intake and regularity of treatment

4. Discussion

The Severity of Dependence: In this study majority of the subjects (62.5%) had moderate level of dependence and patients who had severe level of alcohol dependence where only 23.5%. (Coriale et al., 2019) this is in relation to the study done by coriale where his study subjects also had severity of alcohol dependence with (n=64 out of 245) 26.13% who also had other psychiatric morbidity. This similarity could be due to the global tendency of patients with alcohol dependence to give socially desirable answers which is marked low on the questionnaires and could be due to the emotionally trauma they experience due to various reasons.

The Level of Motivation: In this study majority of the subjects are in pre-contemplation phase of motivation (72.5%) while only 0.5% of the subjects were in preparation or action phase of motivation, this was in contradiction to the study done by Senn (Senn et al., 2020) where nearly majority (42.6%) of his subjects were in action phase of motivation; this could be because in this study majority of the subjects were outpatients and in senn's study subjects were inpatients and were on abstinence. Being an inpatient reduces their ability to take the substance which is seen in senn's study which has its effect in the motivation of the patient.

Relationship between Motivation and Severity of Dependence: In this study there were weak negative correlation between motivation and severity of dependence of alcohol which has no significance. A study done by Ragnhild states that drinking alcohol excessively had no effect on subjects ability to control the alcoholic behavior (Bø et al., 2016); this similarity could be seen because of factors which could include non-punitive responses after a severe alcohol intake, rewarding phenomena (pleasure) of the alcohol and also because alcohol intake might be seen as a method of coping with stress in the subjects' life. Berre states that when the stage of change was reached some alcohol-dependent patients were yet in pre-contemplation and contemplation stages. It was also found that there are links between impaired memory, executive functions, low motivation between good decision-making skills and high motivation (Le Berre et al., 2012).

Association between Motivation and Severity of Dependence with Selected Socio-Demographic and Clinical Variables: The current study brought out that there is significant association between severity of alcohol use and number of hospitalization, which is contradicted by a study done in 2022 by Douglas, in which he describes his subjects had less severe intake of alcohol when they had a secured milieu hospitalization in which they were having less chances to consume alcohol (Polcin et al., 2015). This dissimilarity could be there because of cultural variations in the population i.e., Tamil Nadu, South India and California,

US, where domestic affiliations are considered as significant persuaders to be sober.

The amount of debt caused due to alcohol intake was highly significant with the severity of dependence, and being on regular treatment was also highly significant in the results of the current study, this is in relation with the study done by Polcin, where his study participants also expressed increased motivation when there is financial need due to hospitalization (Polcin et al., 2015).

5. Conclusion

Physicians should think about prescribing medication for patients attending community support groups or rehabilitation treatment because many treatment programs do not offer it. Despite the fact that the majority of pharmacological trials last between 12 and 16 weeks, given the significant risk of relapse, it is customary to continue medication treatment for six to twelve months. It should be encouraged for all patients to join local support organizations like Alcoholics Anonymous. Many patients can successfully combine their use of medication with involvement in support groups.

Education materials regarding ways to reduce stress, how to cope up with stress, overcoming triggers and urges may still be helpful to patients who are hesitant to commit to a specific goal. When patients are ready, doctors should indicate interest in assisting them in cutting back on their drinking. It is difficult to change one's health habits, so the doctor/ team members must frequently pay attention to the patient over time.

Care management has the power to lessen difficulties and extend the period of meaningful life even when full recovery is not possible. If patients are urged to give up alcohol during preventative care appointments, many will cut back on their consumption and finally achieve stable abstinence. Health behavior change is challenging and is characterized by periods of improvement and regression to old habits.

6. Future Scope

This study could bring out insights of alcohol takers or user's motivation to be sober and its effects on their socio-psychological wellbeing.

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