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Original Research Article

Medico-social profile of male alcoholics in a north Indian city

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ABSTRACT

Background: Alcohol Dependence has been posing an unprecedented public health challenge in recent years. Alcohol related morbidity and mortality has attained new zenith that merits attention. Considering the abominable effects of alcoholism, it was decided to study the medico-social profile of male alcoholics in an urban set-up to identify the risk factors and suggest preventive measures.
Methods: 60 subjects reporting to a de-addiction centre at a north Indian town for treatment were studied during September 2014-February 2015. All the individuals were satisfying the criteria of alcohol dependence as per diagnostic and statistical manual of mental disorder. A pretested structured proforma was introduced to the consenting individuals, which included demographic details, personal and family history with details of physical and mental status examination. Data obtained was analysed and tabulated.
Results: The mean age of the alcoholics seeking treatment was 37.86 years. Majority of them were married, middle school educated, employed urbanite, unskilled workers from lower middle class background. Mean ages of first alcoholic drink and first intoxication were 18.95 and 20.35 years respectively. Dependency developed at 28.60 years. Alcoholic father (65%) and brothers (31.67%) appeared tended the subjects towards alcohol. Financial stress and withdrawal problems mostly steered them to seek treatment. Epidemiological insight unveiled many risk factors like vulnerability of adolescents, male sex, nominal schooling, low socio-economic lineage, early employment, peer pressure, alcoholic father and siblings, financial stress and family discord.
Conclusions: More community based studies are suggested to identify the community specific risk factors for alcoholism and recommend suitable preventive measures to abate alcoholism.

Keywords: Alcohol dependence, Son of alcoholic, Male alcoholics

INTRODUCTION

Alcohol is a socially acceptable drink commonly used as mood elevator and stress buster often culminating in to self-induced intoxication. A National Survey documented that prevalence of alcohol use among the adult male in India is around 21% with a wide variation of as low as 7% in Gujarat to 75% in Arunachal Pradesh.[1] There has been a significant lowering of age at initiation of drinking. Earlier study revealed a drop from a mean age of initiation of 28 years to 20 years between birth cohorts of 1920-30 and 1980-90 in India.[2] Repeated observations have confirmed that more than 50% of all drinkers satisfy criteria for hazardous drinking. The unique pattern of heavy drinking depicts typically guzzling more than 05 drinks on special occasions.[3,4] Under-socialized, solitary drinking of spirits, drinking to intoxication to suppress inhibition add to the hazards.[5] Only use of alcohol does not predict the development of alcoholism. The quantity, frequency and regularity of alcohol intake required to

develop alcoholism varies from person to person. Exact biological mechanisms underpinning alcoholism are uncertain; some risk factors like social environment, stress, emotions, genetic predisposition, age and gender have been identified. Current evidence indicates that alcoholism is 50-60% genetically determined, leaving 40-50% for environmental influences.[6] Worldwide estimated 3.3 million people die annually because of alcohol related causes that count for 5.9% of total deaths which portrays the morbidity and mortality load.[7] Considering the staid effects of alcoholism, it was decided to study the medico-social profile of the alcoholics in an urban set-up to identify risk factors and suggest preventive measures to circumvent alcohol related morbidities.

METHODS

The study was conducted among the subjects seeking treatment in a De-addiction Centre at a North Indian town administered by a Catholic church during September 2014 to February 2015. The centre provided pre-therapeutic counselling, de-addiction therapy, post-therapeutic family counselling, follow-up and after care under guidance of psychiatrist and psychologist. Cases needing in-patient care were referred to higher centre. A total of 72 male alcoholics reported to the centre during the study period; however, only 60 subjects could be included in the study. The subjects included in the study were all above 18 years of age and were fulfilling the criteria for alcohol dependence (AD) according to 'Diagnostic and Statistical Manual of Mental Disorder', fourth edition (DSM-IV).[8] 12 subjects could not be included as they were unwilling due to concurrent co-morbid conditions.

Informed consent was obtained from each of the participant. A pretested structured proforma was made including demographic details, personal and family history, general physical with mental status examination and other relevant information, if any. The proforma was introduced to the participants after initial discussion about the objective of the study in presence of their accompanying family members and acquaintances. The proforma was filled up as per the information received from the consenting individual; no questions were asked infringing in to individual's private, family or domestic life. Socio economic status (SES) was ascertained using Kuppuswamy's scale.[9] The data obtained was tabulated and statistically validated. Common statistical applications like Mean, SD, ANOVA, Chi-Sq test and confidence limits were used to ascertain significance. To determine 'Honestly Significant Difference' (HSD) between means of the groups, Tukey's post-hoc HSD test was applied.[10]

RESULTS

The study revealed that mean age of the subjects seeking treatment was 37.86±9.79 with majority (46.67%) in the age group of 31-40 years (Table 1). 85% were Hindu, 15% belonged to Christianity however, no Muslim subjects reported during the study. 60% individuals were married and 20% were divorced (Table 2). Majority were local residents (51.67%) with urban background (61.67%). 38.3% hailed from rural area and 16.6% found migrated recently (last 5 years). 60% subjects were from lower middle class and 36.7% were educated up to 8th standard (Table 3).

Table 1: Age distribution according to religion.

Age group	Religion		Total (%)
	Hindu	Christian	
18-20	-	-	-
21-30	8	3	11 (18.33)
31-40	25	3	28 (46.67)
41-50	10	2	12 (20.00)
51-60	8	1	09 (15.00)
Total (%)	51 (85.00)	9 (15.00)	60 (100.00)

Mean age of presentation 37.86, SD ± 9.79, 85% were Hindu and 46.67% belonged to 31-40 years age group.

Table 2: Marital status according to origin and status of family.

Marital status	Family background		Status of family			Total (%)
	Urban	Rural	Local	Recently migrated	Migrated in past	
Unmarried	04	02	02	01	03	06 (10.00)
Married	21	15	21	06	09	36 (60.00)
Divorced	08	04	06	02	04	12 (20.00)
Widowed	04	02	02	01	03	06 (10.00)
Total (%)	37 (61.67)	23 (38.33)	31 (51.67)	10 (16.66)	19 (31.67)	60 (100.00)

61.67% were urban and 51.67% belonged to local area.

Table 3: Educational and socio-economic status.

Educational status	Grade I (Upper)	Grade II (Upper middle)	Grade III (Middle)	Grade IV (Lower middle)	Grade V (Lower)	Total (%)
Illiterate	--	--	--	--	9	9 (15.00)
Primary (6 Standard)	--	--	--	9	11	20 (33.33)
Middle school (8 Standard)	--	--	--	22	--	22 (36.67)
High school (10 Standard)	--	--	1	5	--	6 (10.00)
Higher school (12 Standard and above)	--	--	3	--	--	3 (5.00)
Total (%)			04 (6.67)	36 (60.00)	20 (33.33)	60 (100.00)

60% subjects were from lower middle class and 36.7% were educated up to 8th standard.

Table 4: Employment and skill status.

Skill status	Employment status		Total (%)
	Employed (%)	Unemployed (%)	
Unskilled	41 (68.33)	05 (8.33)	46 (76.67)
Skilled	09 (15.00)	05 (8.33)	14 (23.33)
Total (%)	50 (83.33)	10 (16.67)	60 (100.00)

Majority (68.33%) were unskilled but employed; the finding is significant, Fisher's Probability 0.043, Significant, p<0.05, Chi-square 4.77, df 1, p=0.028, Significant, p <0.05

Table 5: Age at first drink.

Age group (in years)	Age at first drink			Total (%)
	Mean	SD	95% CI	
21-30	15.00	±3.22	8.68 – 21.32	11 (18.33)
31-40	17.85	±3.60	10.81 -24.90	28 (46.66)
41-50	19.75	±4.37	11.18 – 28.31	12 (20.00)
51-60	26.11	±3.59	19.08 – 33.14	09 (15.00)
Total	18.95	±4.94	9.26 – 28.63	60 (100.00)

Computed F is 16.42, df 3, 56; Significant at p< 0.05. Differences in the mean 'age at first drink' between the groups (Gr) are significant. The differences are significant between Gr. 1 vs. Gr 3 & 4, Gr. 2 & 3 vs. Gr. 4 when Tukey's HSD (Honestly Significant Difference) applied. Mean age at first drink is 18.95 ± 4.98 (range 12 - 30).

Table 6: Age at first intoxication.

Age group (in years)	Age at first intoxication			Total (%)
	Mean	SD	95% CI	
21-30	17.09	±2.39	12.41-21.77	11 (18.33)
31-40	19.32	±3.13	13.19 -25.45	28 (46.66)
41-50	21.17	±3.76	13.79-28.54	12 (20.00)
51-60	26.44	±4.13	18.36-34.53	09 (15.00)
Total	20.35	±4.32	11.88-28.82	60 (100.00)

Computed F 14.86, df 3, 56; Significant p<0.05. Differences in mean 'age of intoxication' between the Gr. are significant. The differences are significant between Gr. 1 vs. Gr. 3 & 4, Gr. 2 &3 vs. Gr. 4 when Tukey's test applied. Mean age at first intoxication is 20.35 ±4.32 (Range 14 - 32).

76.67% subjects were unskilled workers however, 83.33% were employed. Majority of the respondents (68.33%) were unskilled but employed; the finding is significant (Table 4). Mean age at first drink was 18.95±4.94 years.

A progressive ascent in the 'age at first drink' was observed with the chronological increase in the age group of the cohorts (Table 5). This finding is statistically significant.

Table 7: Age of daily drinking.

Age group (in years)	Age of daily drinking			Total (%)
	Mean	SD	95% CI	
21-30	22.55	±2.21	18.22 - 26.87	11 (18.33)
31-40	23.07	±3.21	16.78 - 29.35	28 (46.66)
41-50	26.67	±4.12	18.59 - 34.74	12 (20.00)
51-60	28.56	±3.09	22.51 - 34.61	09 (15.00)
Total	24.52	±3.89	16.89 - 32.14	60 (100.00)

Computed F is 9.61, df 3, 56; Significant p< 0.05. Differences in mean age of 'daily drinking' between the Grs. are significant. The differences are significant between Gr. 1 vs. Gr. 3 & 4, Gr. 2 vs. Gr. 3 & 4 when Tukey's test applied. Mean age of daily drinking is 24.52 ±3.89 (range 20 - 32).

Table 8: Age of dependence.

Age group (in years)	Age of dependence			Total (%)
	Mean	SD	95% CI	
21-30	26.27	±2.53	21.31 - 31.24	11 (18.33)
31-40	27.14	±3.13	20.99 - 33.28	28 (46.66)
41-50	30.66	±4.16	22.51 - 38.82	12 (20.00)
51-60	33.22	±3.15	27.04 - 39.40	09 (15.00)
Total	28.60	±4.04	20.68 - 36.51	60 (100.00)

Computed F 11.3, df 3, 56; Significant p< 0.05. Differences in mean 'age of dependence' between the Grs. are significant. The differences are significant between Gr. 1 vs. Gr. 3 & 4, Gr. 2 vs. Gr. 3 & 4 when. Tukey's test applied. Mean of age of dependence is 28.60 ± 4.04 (range 23 -38)

Table 9: Tolerance according to father's drinking habit.

Father's drinking habit	Tolerance (%)	No tolerance (%)	Total (%)
Father alcoholic	34 (56.67)	5 (8.33)	39 (65.00)
Father non-alcoholic	11 (18.33)	10 (16.66)	21 (35.00)
Total	45 (75.00)	15 (25.00)	60 (100.00)

Yates Chi-sq 7.06, df 1, p = 0.007, Significant at p<0.05, phi 0.3834. Pearson Chi-Sq 8.82, df 1, p = 0.003, Significant at p<0.05. 56.67 % subjects were 'son of alcoholic' (SOA) and manifested tolerance; the association is significant and positive.

Table 10: Withdrawal according to family history.

Family history	Withdrawal (%)	No withdrawal (%)	Total (%)
Father alcoholic	33 (55.00)	6 (10.00)	39 (65.00)
Father non-alcoholic	10 (16.67)	11 (18.33)	21 (35.00)
Total	43 (71.67)	17 (28.33)	60 (100.00)

Yates Chi-sq is 7.47, df 1, p = 0 .0063, Significant at p<0.05, phi 0.39. Pearson Chi-sq 9.2, df 1, p = 0.0024, Significant p<0.05. 55% subjects were 'son of alcoholic' and manifested withdrawal; the association is significant and positive.

The mean age at 'first intoxication' was found to be 20.35 ±4.32 with a range of 14 - 32 years (Table 6). Getting intoxicated for the first time mostly imbibed an experience of disorderly speech, gait, activity, behaviour and conduct after consuming large quantity of alcohol in a relatively short time.[8] There is a notable ascendance in 'mean age at first intoxication' with increase in the age group of the legions. Aged cohorts experienced first intoxication significantly at a later stage as compared to the younger groups. The respondents acquired the habit of daily drinking at a mean age of 24.52 ±3.89 with a range of 20 - 32 years (Table 7). It emerges worth to note that it took just around $5^{1/2}$ year to befall a regular drinker from a casual one. It is also important that a significant difference was observed in the mean age of daily drinking among the elderly and the younger groups. Dependency was worked out on the basis of DSM IV criteria and the actual attributes are depicted as Figure 1.[8] Dependency developed at a mean age of 28.60±4.04 with a range of 23 - 38 years and the younger flock developed the same significantly at an early age (Table 8).

Tolerance is characterised by 'need of markedly increased amount of alcohol to achieve intoxication and desired effect; associated with diminished effect on continued use of same amount of alcohol'.[8] 65% subjects were 'son of alcoholic' (SOA) and 75% manifested symptoms of tolerance. 56.67% of the SOA showed

presence of tolerance; the association is significant and positive (Table 9).

Withdrawal is manifested as a result of cessation of alcohol use among ADs commonly characterised by tremor, insomnia, nausea, vomiting, hallucination, illusion, psychomotor agitation and seizure causing significant social and occupational distress.[8] 71.67% gave history of withdrawal. 55% subjects were SOA and manifested withdrawal (Table 10). The association is significant and positive.

Table 11: Reasons to start alcohol.

Reasons	No. of subjects			All reasons
	First reason (%)	Second reason (%)	Third reason (%)	
Modelled by father	31 (51.67)	06 (10.00)	02 (3.33)	39
Influence of brothers	04 (6.67)	12 (20.00)	03 (5.00)	19
Peer pressure at work	04 (6.67)	08 (13.33)	04 (6.67)	16
Social compulsion with friends	02 (3.33)	10 (16.67)	06 (10.00)	18
Family discord	05 (8.33)	06 (10.00)	04 (6.67)	15
Loss of job	07 (11.67)	05 (8.33)	06 (10.00)	18
Chronic illness	02 (3.33)	-	02 (3.33)	04
Out of curiosity	02 (3.33)	06 (10.00)	08 (13.33)	16
Pleasurable activity	03 (5.00)	03 (5.00)	06 (10.00)	12
Total	60 (100.00)	56 (93.33)	41 (68.33)	

Swayed by father (51.67%) and loss of job (11.67%) were important first reasons. 93.33% and 68.33% had second and third reasons respectively.

Table 12: Reasons for seeking treatment.

Reasons	No. of subjects			All reasons
	First reason (%)	Second reason (%)	Third reason (%)	
Financial stress	15 (25.00)	12 (20.00)	10 (16.67)	37
Family conflict	10 (16.67)	08 (13.33)	06 (10.00)	24
Withdrawal problem	12 (20.00)	16 (26.67)	08 (13.33)	36
Loss of job	06 (10.00)	04 (6.67)	02 (3.33)	12
Accidents	05 (8.33)	02 (3.33)	02 (3.33)	09
Spousal pressure	09 (15.00)	15 (25.00)	10 (16.67)	34
Related morbidity	03 (5.00)	-	02 (3.33)	5
Total	60 (100.00)	57 (95.00)	40 (66.67)	

Financial stress (25%) and withdrawal (20%) were important among first reasons for seeking treatment. 95% and 66.67% had second and third reasons respectively.

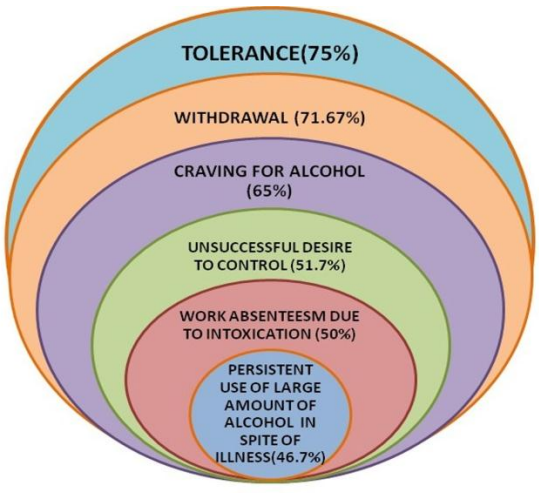

Figure 1: Dependency attributes among alcoholics.

51.67% stated 'carried away by alcoholic fathers' followed by 'loss of job' (11.67%) as important first reasons for alcohol indulgence. 93.33% had second reason of which 20% got inclined to alcohol because of their brothers. 68.33% had even third reason of which curiosity reckoned for 13.33%. Considering all three reasons, 'father as a model' 39 (65%) and 'influencing brothers' 19 (31.67%) deemed impressive (Table 11).

Financial stress (25%) followed by withdrawal (20%) were important among the first reasons for seeking treatment. 95% had second reason of which 26.67% related to withdrawal followed by spousal pressure (25%). Even 66.67% stated a third reason of which financial stress and spousal pressure counted equally 16.67% each. Pooling all three reasons together, financial stress 37 (61.67%) and withdrawal 36 (60%) appeared contributory (Table 12).

DISCUSSION

The present study revealed that the mean age of the alcoholics while seeking treatment was 37.86 with majority (46.67%) in the age group of 31 - 40 years. In a similar study among hospital in-patients in Kozhikode, mean age was found to be 44.34 years with a range of 20-78 years.[11] Another study in a similar assemblage reported the mean age to be 41.9 years with 31.3% in the age group of 31 - 40 years.[12] 85% of the subjects were Hindu comparable to 84.4% reported in the past.[11] No Muslim could be found among the respondents. Alcoholism is not much reported among Muslims because of higher number of abstainers due to strict religious rigidity.[13] 60% individuals were married and 20% were divorced. 22 (36.67%) married subjects reported domestic discord related to use of alcohol. Similar observations have been documented in earlier study.[11] Majority (61.67%) were from urban background; 60% were from lower middle class and 36.7% were educated up to 8th standard. These findings are analogous to earlier annotations.[11]

76.67% subjects were unskilled however, 83.33% were employed. Majority (68.33%) were unskilled but employed; the finding is significant. A study in the past reported that 76.6% of the subjects were educated up to 10th standard and only 34.4% were unskilled labour.[11] The finding in the present study of '68.33% unskilled but employed', carted a significance of ease of money to dole out for alcohol even for the lower socio-economic strata. Those with lesser education and those among skilled and unskilled workers are more likely to become dependent on alcohol.[2,14]

Mean age at 'first drink' was 18.95 with a range 12-30 years. A statistically significant progressive rise in the 'age at first drink' was observed with the sequential increase in the age group of the cohorts. This possibly implies that there has been a remarkable boost in the use of alcohol in recent years as younger population found being more indulgent when compared to the elderly. Reported 'mean age of onset of alcohol use' to be 17.34 years with a range of 12-25 years in earlier study, [11] commensurate with the finding of the present work. It is reported that there has been a shift of mean age of onset of alcohol use from 28 years to 20 years by 1920 to 1990.[2,14] Present endeavour has also exposed an identical insight.

Mean age at 'first intoxication' was 20.35 years with a range of 14-32 year; the finding is corroborated by the observation of a similar study in Andhra Pradesh.[15] There is a notable ascent in the 'mean age at first intoxication' with the consequent increase in the age group of the legions. Aged cohorts experienced first intoxication significantly at a later stage (mean - 26.44 years for the age group of 50–60 years). This finding appears corollary to the reality that the aged cohort initiated the use of alcohol reasonably later.

Mean age of 'daily drinking' is 24.52 years with range of 20-32 years. This finding is similar to that noted in earlier study.[15] Differences in the mean age of 'daily drinking' between the various age groups are significant. Mean age of 'daily drinking' was 28.56 years in the most elderly group as compared to 22.51 years in the youngest one. It appears pertinent that apart from a significant drop in the 'age of initiation of alcohol' over the last few decades, the other facets of alcohol drinking has excelled convincingly and surpassed all kinds of precept doctrine.

'Mean age of dependence' was found to be 28.60 years with a range of 23-38 years, which commensurate with observation of a previous work.[15] The differences in the mean 'age of dependence' between the different age groups are significant. 'Mean age of dependence' was 33.22 years in the most elderly group as compared to 26.27 years in the youngest one. Analytical insight reveals that around within 10 years of initiation of alcohol, the subjects had befallen to be dependent.

39 (65%) subjects were 'son of alcoholic' (SOA) and 19 (31.67%) were siblings of alcoholics. It appears that drinking run in the family where genetic as well environmental influences both work in same socio-cultural milieu. It has been documented that there is a high risk of developing alcoholism for individuals with significant family history.[16,17] Earlier study has reported 72.2% of alcoholics having history of alcohol use in first degree family members which is lower when compared to the present study.[11] Possibly strong cultural effect, easy availability of alcohol and high employment rate observed among the study subjects could be inflicting. 56.67% of SOA manifested tolerance; the association is significant and positive. 75% subjects exhibited tolerance which is lesser when compared to an earlier study.[15] It has been documented that SOA's were less impaired by alcohol as compared to 'son of non-alcoholics' (SONA).[18] Compared to SONA's, SOA's are affected strongly by alcohol early in the drinking session but develop tolerance in the later stage.[19] This predisposition probably contributes to increased drinking and the risk alcohol dependence in SOA's.

71.67% subjects gave the history of withdrawal in the past of which SOA's contribution was significant. Earlier work reported as high as 95% presence of withdrawal in the study subjects.[15] Therefore, the sample subjects in this study appear to represent lower severity when compared to earlier work.

Respondents were asked to cite three reasons for initiation of alcohol. Influence of alcoholic father (51.67%) and feeling low at loss of job (11.67%) were recounted to be two major first reasons. All three reasons combined, alcoholic father (65%), influencing brother (31.67%), social compulsion with friends and loss of job (30% each) were found contributory. Earlier study cited peer pressure (56.6%) as the main reason for initiation of alcohol followed by curiosity in 33.7% subjects.[12] In the

present study, when all three reasons are pooled, together 'social compulsion with friends' and 'peer pressure at work' accounted for 56.67% of the reasons.

Financial stress (25%) followed by withdrawal (20%) were found important among first reasons for seeking treatment. 95% had second reason of which 26.67% related to withdrawal followed by spousal pressure (25%). 66.67% had third reason of which financial stress and spousal pressure attributed equally 16.67% each. All three reasons combined, financial stress 37 (61.67%) followed by withdrawal 36 (60%) were found to be striking. Earlier study documented financial strain due to alcohol (70%) as commonly ascribed reason for seeking treatment, followed by family conflicts and deteriorating health 65% each.[15] Similar reasons have been recognized in other studies also.[20]

CONCLUSION

The study revealed that the mean age of the alcoholics seeking treatment was 37.86 years. Majority were married, middle school educated, employed urbanite, unskilled workers belonging to lower middle socio-economic class. Mean ages of first alcoholic drink and first intoxication were 18.95 and 20.35 years respectively. Dependency developed at 28.6 years; around 10 years after initiation of alcohol. Elderly lot were found significantly tardy in attaining important mile-stones of alcoholism. Majority (65%) had an alcoholic father which made them inclined to alcohol. Financial stress and withdrawal problems mostly ushered them to seek treatment. Analytical percipience divulged many risk factors for 'alcohol dependence' like vulnerability of adolescents, male sex, inadequate schooling, low socio-economic lineage, early employment, peer pressure, alcoholic father and brother, onslaught of financial stress and family discord which possibly misguide a child or an adolescent to fall prey to alcohol and become a dependent at later stage. Collective community and social actions are needed to identify such families or individuals at risk; guide and counsel them to recourse to rectitude. Continuing community surveillance is constitutively crucial to identify conditional factors for development of alcoholism among members of any community and collective community education through periodic ' Health Awareness Camps' will be propitious to idealize the members. The conduct of the study in urban set up among limited number of male subjects seeking treatment is construed as a limitation. However, points highlighted endure importance for any community not only on account of alcohol dependence but also in connection with smoking, life style diseases and depression, suicide and road accidents; as all these disorders revolve round the same psycho-social eventualities.[11] It is felt relevant to concede that many community based studies are needed to identify the community specific risk factors for alcoholism and recommend suitable preventive strategies to circumvent alcoholism.

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