

Original Research Article

Assessment of quality of life in alcohol dependents taking treatment in government de-addiction centre, Chennai

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Received: 04 May 2018

Revised: 21 May 2018

Accepted: 23 May 2018

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ABSTRACT

Background: Heavy alcohol drinking is a major public health problem in most of the developing countries. Each year about 3.3 million deaths is caused by alcohol consumption and this is the main causal factor for about 200 various diseases that contributes about 5.9% deaths. Quality of life (QoL) is affected in alcohol dependents significantly. This study was conducted to determine the QoL of alcohol dependent patients in government de-addiction centre and to study the factors associated with the QoL of alcohol dependents.

Methods: Across sectional study done using validated semi structured questionnaire contains sociodemographic details, SADD and WHO QoL-BREF-26 questionnaire.

Results: Almost half of the participants (46.7%) were less than 30 years old. The major portion of the participants (70%) belonged to the lower class. Almost half of them (46.6%) were either unmarried or separated. Major portion of the participants of the study population are having medium (46.67%) and high level (40%) of dependence. Around 83.3% of the participants were affected by any one of the psychiatric co-morbidities. Around 2/3rd of participants (66.7%) are started to work before the legal age to work. Half of the alcohol dependents (53.33%) having family members with harmful alcohol intake behaviour. The mean baseline score of QoL of study subjects were compared to the mean scores of the healthy individuals.

Conclusions: The QoL is the most valuable tool for the interventional management and designing the management programme. Around 80% of the study population are literate and 90% of the study population having good intention towards recovery.

Keywords: Alcohol dependence, QoL, De-addiction

INTRODUCTION

Heavy alcohol drinking is a major public health problem in most of the developing countries.¹ Alcohol dependence is the second most common psychiatric condition. Each year, about 3.3 million deaths is caused by alcohol consumption and this is the main causal factor for about 200 various diseases that contributes about 5.9% deaths.² As per WHO, 2010 report total global consumption was equal to 6.2 litre per person aged more than 15 years.

Alcohol consumption is continuously increasing in our country and the percentage of alcohol dependents also constantly increasing. Nowadays, alcohol dependency is a very big social issue and personal threat in many societies.³ Socio cultural factors, influence of genetic and biological predisposition contribute to alcohol dependence. Alcohol dependence leads to many complications like GIT, CNS complications, malnutrition and social complications like occupational problems criminality, financial problems etc. The overall quality of

life (QoL) is reduced in alcohol dependent individuals. Alcohol dependence can be managed by detoxification, psychotherapy, group therapy, deterrent drugs (alcohol sensitising drugs), anti-craving agents and psychosocial rehabilitation.⁴ Among the studies about the alcohol dependents, several studies reported the prevalence and risk factors, but only few studies measured the Quality of life.⁵ QoL is affected in alcohol dependents significantly, but studies regarding this are very minimal. Patient – reported outcome measures such as QoL may be useful in orienting choice between different therapeutic options. In public health point of view, assessment of QoL is important to evaluate the effectiveness of existing programs. Hence, this study was conducted to measure the QoL among alcohol dependent individuals and how it changes with management in de- addiction centre.

Objective

- To determine the QoL of alcohol dependent patients in government de-addiction centre, Chennai.
- Study the factors associated with the QoL of alcohol dependent patients.

METHODS

This is a descriptive cross-sectional study conducted during the period of March 2015 to July 2015, among Alcohol dependents taking treatment in Government de-addiction centre at Communicable Diseases Hospital, Tondiarpet and Chennai. Patients with withdrawal symptoms and seriously ill patients are excluded. Comparison is done with Quality of Life at baseline among the patients. Sample size was calculated at 30 based on mean QoL score of 21.45 and (\pm SD) is 5.16 using the formula $N = \frac{(Z_{\alpha/2})(\sigma)^2}{E^2}$, Alpha error is 5%, Desired accuracy (E) 10% and 10% non-response rate.³

Chennai Corporation is now running two De- addiction centres in Chennai. First one was started at Royapettiah in 2010. Second one was started in March 27, 2014 at Communicable disease hospital, Tondiarpet. Of the above two De-addiction centers, CDH, Tondiarpet was chosen randomly. All the patients admitted for treatment from March 2015 were included in the study till sample size was reached. Total of 30 patients were continuously selected who satisfied the selection criteria. A validated semi structured questionnaire was used for data collection. Three parts of the questionnaire were Socio-demographic, General health and Alcohol profile, SADD Questionnaire and WHO QoL –BREF26 Questionnaire.⁶ After getting approval from institutional ethics committee, the Commissioner, City health officer of the Corporation of Chennai and The Director of Communicable Diseases Hospital, Tondiarpet. The study population were explained about the study, confidentiality, their rights to participate, not to participate or quit from the study during the period of study and got the informed consent from all the participants. During the interval strict privacy,

confidentiality, and empathy were maintained. All the subjects were given clearly designed structured questionnaire on socio-demographic, general health and alcoholism profile. The SADD Questionnaire was used to assess severity of alcohol dependence. Tamil version of the WHO QoL-BREF-26 questionnaire was used to collect data on Quality of life of the participants from their perspective at the baseline before the initiation of treatment after detoxification.

Analysis

The collected data was analysed using Statistical package for Social Science (SPSS) Version 20. Basic socio-demographic variables, general health and alcohol related variables were analysed as independent variables one by one. Variables attended with low QoL at base line using Mann Whitney U and Kruskal Wallis test.

RESULTS

This study assess the base line quality of life of alcohol dependents, who got admitted for treatment and after the three months prospective follow up and also studied about the factors associated with the outcome. Out of 35 patients consequently selected from the patients admitted for treatment, 5 patients were not interested to participate in the study. The response rate was 85.7%.

Table 1: Socio demographic characteristics.

Socio demographic characteristics (N=30)	N (%)
Age	
<30	14 (46.7)
31-40	11 (36.7)
>40	5 (16.7)
Education	
Illiterate	6 (20)
Primary and literate	3 (10)
Middle school	12 (40)
High school	3 (10)
Post high school and diploma	6 (20)
Occupation	
Unemployed	3 (10)
Unskilled	10 (33)
Semiskilled	12 (40)
Skilled worker	2 (6)
Clerical work	3 (10)
Socioeconomic status	
Upper middle	1 (3.3)
Lower middle	8 (26.7)
Upper lower	21 (70.0)
Living area	
Urban	20 (66.6)
Urban slum	10 (33.3)

Table 1 shows almost half of the study participants (46.7%) were less than 30 years old. Around 80% of the study population are literate. Of the participants 10% of them are unemployed. The major portion of the participants (70% i.e. 20 participants) belonged to the lower class (the upper lower). Of the participants 33.33% are coming from urban slums i.e. living in severely compromised sanitary and environmental conditions.

Table 2: Personal characteristics.

Personal Characteristics	N (%)
Order of birth	
First- personal	10 (33.3)
Middle	9 (30)
Last	10 (33.3)
Only child	1 (3.3)
Marital status	
Single	10 (33.3)
Married	16 (53.3)
Separated	4 (13.3)
Living arrangements	
Family	29 (96.7)
Friends/distant relatives	1 (3.3)
Motivated by	
Wife	12 (40)
Parents/family members	11 (36.7)
Relatives	6 (20)
Friends	1 (3.3)
Presence of self-motivation	27 (90)
Religion	
Hindu	21 (70)
Christian	9 (30)

Table 2 shows, There was an almost equal distribution across the participants relating to birth order. Almost half of them (46.6%) were either unmarried (33.3%) or separated (13.3%). The main motivational role for convincing alcohol dependents for treatment is played by spouse (in 40% of cases). Very least motivation was driven by friends (3.33%) probably due to peers with the same habits. Among the study population about 90% (27 patients) are having good intention towards recovery from alcohol dependency. In study population, 70% (21 participants) are Hindus and 30% (9 participants) are Christians.

In Table 3, it was noted that 86.7% of the participants have been drinking for more than 5 years and a small proportion (16.6%) had been drinking for more than 20 years. About 22 out of 30 participants (73.33%) had been using brandy only and other 8 participants drink any varieties. Majority (43.3%) of the participants had been regularly taking about 360 ml/day. Major portion of the participants of the study population are having medium level (46.67%) and high level of dependence (40%) as per the SADD questionnaire. It was disturbing to note 20 out of 30 participants (66.67%) started to drink before the

age of 18 years. 70% of the study population had spent less than 50% of their income for drinking.

Table 3: Patterns of alcohol dependence.

Patterns of alcohol dependence (N=30)	N (%)
Years of drinking	
<5 years	4 (13.3)
5-10 years	9 (30)
11-15 years	6 (20)
16-20 years	6 (20)
>20 years	5 (16.7)
Type of alcohol	
Brandy	22 (73.3)
Anything	8 (26.7)
Quantity	
180 ml	9 (30)
360 ml	13 (43.3)
540 ml	6 (20)
720 ml	2 (6.7)
Alcohol dependence	
Low	4 (13.3)
Medium	14 (46.7)
High	12 (40)
Age of starting alcohol consumption	
<18 years	10 (33.3)
>18 years	20 (66.7)
Percentage of income spent on alcohol	
25-50%	21 (70)
51-75%	6 (20)

Table 4 shows, Age at starting work: Around 2/3rd of participants (66.7%) are started to work before the legal age to work while 2 participants were students and unemployed. In the study of drinking habits of the family members, we found almost half of the alcohol dependents (53.33%) having family members with harmful alcohol intake behaviour. Patients with psychiatric illness present in 5 participants family (16.67%) They are commonly brothers, sisters and wives of the participants. They are affected by depression, schizophrenia and repeated suicidal attempts. Loss of family members due to harmful alcohol intake occurred in 40% (12) of study population. 26 participants (86.7%) were using other substances like tobacco and cannabis. Among the 26 other substance users along with alcohol intake, 4 persons use it for duration more than ten years.

All the participants had at least one of physical symptoms like body pain, insomnia, nausea. Around 83.3% of the participants were affected by any one of the psychiatric co-morbidities like depression, aggressive out bursts, hallucinations, paranoid ideas, suicidal ideation/attempts and deliberate self-harm. About 73.33% of the sample population had been practising verbal abuse and physical violence on the family members especially wife and children All the participants had the experience of

drunken drive. Although for (76.67%) participants this was the first attempt to come to the De-addiction centre. Five participants (16.67%) had made one attempt and two participants had even attempted twice earlier. In the 7 participants who took treatment for de-addiction in the past, 5 of them took allopathic medicines and 2 of them took alternative medicine like Siddha, Homeopathy, Native medicines, etc.

Table 4: Risk factor distribution.

Risk factor distribution	N (%)
Age at starting work	
<14 years	20 (66.7)
>14 years	8 (26.7)
Use of alcohol by family members	16 (53.3)
Family history of psychiatric illness	5 (16.7)
Relationship of the affected family member	
First degree	5 (16.7)
Death due to alcohol in family	12 (40)
Type of relationship	
First degree	12 (40)
Other substance abuse	26 (86.7)
Type of substance abuse	
Tobacco	20 (76.92)
Ganja	3 (11.54)
Both	3 (11.54)
Method of consumption	
Smoking	5 (19.2)
Chewing	14 (53.8)
Both	7 (26.9)
Duration of substance use	
<5 years	10 (33.3)
6-10 years	12 (40.0)
>10 years	4 (13.3)

Mean scores at baseline compared to healthy individuals from a previous study.⁵

Table 5: QoL at baseline compared to healthy individuals.

Domain	At baseline	Scores of healthy individuals	P value*
Physical	17.73±3.6	23.95±3.40	<0.01
Psychological	11.43±3.2	20.44±2.96	<0.01
Social	6.19±1.5	10.6±2.13	<0.01
Environmental	21.13±2.69	27.00±4.11	<0.01

*Analysis done using Wilcoxon signed rank test.

The mean baseline score of QoL of study subjects were compared to the mean scores of the healthy individuals shown in Table 5. Scores of all the four domains of QoL are significantly reduced at the time of admission.

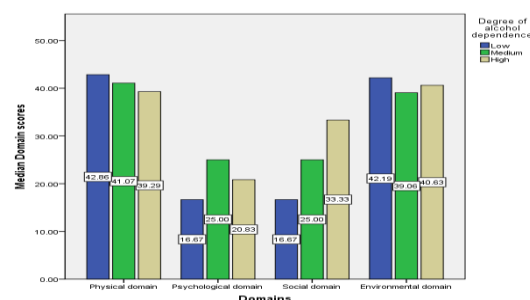


Figure 1: Degree of alcohol dependence and low QOL scores at baseline.

DISCUSSION

Even though the quality of life in alcohol dependents is the most important aspect to study, only very few studies have been done so far in our country regarding this aspect. Particularly in south India, we could not find any publications. In most of the National and International studies, SF-36 quality of life questionnaire was commonly used to assess QoL. Only few studies have been done by using WHOBRIEF-26 questionnaire. The QOL is the most valuable tool for the interventional management and plays the important role in designing the management programme. (WHO, 2002). Out of 35 patients consequently selected from the patients admitted for treatment, 5 patients were not interested to participate in the study. The response rate is 85.7%. QoL of study population are compared with mean score of healthy individuals in past studies. Around 80% of the study population are literate, which is lower than the Tamil Nadu state's male literacy rate (86.77%).⁷ More than two thirds (70%) of the participants had not crossed middle school education and Shruti srivastava et.al study showed the same results.³ Almost half of them (46.6%) were either unmarried or separated. The reason for separation in all the separated people is harmful alcohol drinking. Majority were married in past studies.^{3,5} In total 30 sample population except only one person who is living in a very distant relative's house, all others are living in good family setup. The distribution of married, unmarried and separated people were similar with Giri et al.⁵ Self-motivation is the most important factor for the success of treatment. In this De-addiction centre, self-motivation is considered as the main criteria to get admitted. Among the study population about 90% (27 patients) are having good intention towards recovery from alcohol dependency. Only 3 patients (10%) were not having self-motivation at the time of admission, they were given very effective counselling during the period of admission. Now they are regularly coming for follow up and taking medicines regularly. In study population, 70% (21 participants) are Hindus and 30% (9 participants) are Christians. This data is not matched with the Tamil Nadu religious data (Hindu=87.58%, Christians=6.2%). Results were in concordance with Giri et al.^{5,8}

Majority of the participants had psychiatric comorbidities. It corroborates the fact that psychiatric illnesses like depression and anxiety with alcohol dependence syndrome patients and severity of the anxiety and depression were worse in patients with alcoholic addiction.⁹ Age at starting work was found to be an influencing factor in alcohol dependence since early financial freedom probably plays a major role for early starting of drinking. Mean scores at baseline compared to healthy individuals from a previous study.⁵ The mean baseline score of QoL of study subjects were compared to the mean scores of the healthy individuals shown in Table 5. Scores of all the four domains of QoL are significantly reduced at the time of admission. The Srivastava et al, Donovan et al, and Pal et al, studies also have shown the same results.^{3,10,11} Except the variables like substance abuse, alcoholism in family members, alcohol related deaths in the family and percentage of income spent on alcohol, all other variables are not associated with low QoL. We have measured the severity of alcohol dependence by using SADDQ. There was no significant association between severity of alcohol dependence and scores of all the QoL domains. Shruti Srivastava et al and Lahmek et al assessed the severity by using SADQ and mentioned no marked changes in physical and mental domains of the QoL.^{3,12}

Successful improvement of QoL achieved in this De-addiction centre by,

- Strict alcohol abstinence,
- Efficient management of withdrawal symptoms, detoxification and de-addiction
- Totally free of cost investigations and treatment.
- Treating other medical and psychiatric problems
- Effective counselling to the patients and family members of the patient
- Regular and sincere meetings arranged by Alcohol Anonymous team
- Daily yoga and meditation activities by experts
- Various recreation activities like watching TV, playing chess and carom board like healthy indoor games etc.
- Patient friendly hospital atmosphere
- Creating positive family environment and ensure accompanying of close family member with the patient during follow-up
- Effective system to trace out the missing and discontinued patients.

Recommendations

Since the prevalence of alcohol dependents continuously increasing, more government de addiction centres across the state will be needed. School based alcohol educational program that emphasis on abstention or at least on delaying the age of start of drinking must be implemented. Providing and encouraging alternative activities and involving social movements like alcoholic anonymous and other non-governmental groups.

Sensitization/training of medical and paramedical personnel in identifying alcohol dependence at the primary care level. Establishing a specific treatment system for alcohol related problems. Positive family and social environment should be very essential to maintain the abstinence.

Limitations

Treatment variables on QoL can be studied in longer follow-up. Alcohol dependence and degree of dependence were assessed by only clinical interview, biochemical investigations should be evaluated. This study was done in government de addiction centres only. There are several private de-addiction centres in Chennai. Without studying their role in treating alcohol dependence, this study does not give holistic approach. Factors like accessibility and availability of alcohol which play an important role in alcohol dependence should be studied. Because of this study was done in government de addiction centre, the results can't be generalized to general population.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Selvaraj R, Duraimurugan M. Assessment of quality of life in alcohol dependents taking treatment in government de-addiction centre, Chennai. *Int J Community Med Public Health* 2018;5:2755-60.