Quality of Life in Alcohol-Dependent Patients during An Inpatient Withdrawal Programme

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Abstract: Introduction: *QOL Has Emerged As An Important Treatment Outcome Inpatients Of Alcohol Dependence To Assemble All Their Capacities To Regain Their Work.*
AIM: *To Determine The Change In QOL After 3weeks Of Detoxification And To Assess The Relationship Between Disease Severity & QOL.*
Methodology: *A Study Sample Consisting Of 100 Patients, Who Were Diagnosed According To ICD-10 Criteria For Research And Admitted In Deaddiction Ward In Government Hospital For Mental Care, Visakhapatnam. Base Line Severity Of Dependence And QOL Were Assessed By Using Severity Of Alcohol Dependence Questionnaire (SADQ), WHO Quality Of Life QOL-BREF Scale And Followed Up To 3weeks To Assess QOL After Detoxification And Data Was Analysed With Relevant Statistics*
Results: *QOL Was Improved Significantly When Compared At The Baseline After Follow Up, Which Were Statistically Highly Significant(P-0.000)*
Conclusion: *QOL May Improve Compliance And Enables The Patients To Pursue Their Work.*
Key Words: *Quality Of Life, Inpatient Withdrawal Programme*

I. Introduction:

The alcohol dependence syndrome, which is usually chronic, requires patients to muster all their capacities for reconstruction and adaptation[1].Alcohol dependence, a common psychiatric disorder in the general population, has a significant impact on health. In recent years, alcohol dependence has become a major social and personal menace in most societies.

According to Global Status Report on alcohol, alcohol use disorders accounted for 1.4% of the global disease burden. Alcohol consumption causes 3.2% of deaths (1.8 million) and 4.0%of the disability-adjusted life years lost (58.3 million)[3]. A nationwide survey of representative male population between the age of 12 and 60 years in India reported alcohol use in the last 30 days in 28% and alcohol dependence according to the International Classification of Diseases-(ICD-10) (WHO, 1992) in 4% of the population[2.]

In a developing country like India, over 20% of all disability-adjusted life years are lost chiefly because of poor health status of the people, marked nutritional deficiencies, and widely prevalent alcohol addiction [4,5].QOL is an important parameter that provides an insight into how a disorder impacts life of those affected.

World Health Organization defined quality of life as "an individual's perception of their position in life, and in the context of culture and value systems in which they live, and also in relation to their goals, expectations, standards, and concerns.[6"]

Patient-reported outcome measures such as QOL may be useful in orientating choice between different therapeutic options since effective treatment should not only improve the clinical state and prognosis of the patient but also their QOL[7,8].Quality of life has emerged as an important treatment outcome measure for alcohol dependence whose natural course comprises of remission and relapse[10]

Among various psychiatric disorders, alcohol related disorders significantly affect QOL, but this area has not been extensively studied.A few studies have evaluated QOL as the primary measure in treatment trials of patients with alcohol dependence [11].Most of these studies have found QOL to be decreased considerably in alcohol-dependent patients, but little information is available on how QOL changes during a therapeutic intervention [12-14]

In this study we had studied the changes in quality life in various domains after an therapeutic intervention and also the association between severity of alcohol dependence and quality of life before the intervention.

II. Aim & objectives

The Aim of Study is to determine the changes in QOL of alcohol dependence subjects after 3weeks of inpatient withdrawal programme and the objectives which were taken to assess in this study werethe relationship between disease severity and QOLand the relationship between age of onset of drinking, age of dependence, socio demographic and other variables with disease severity.

III. Methodology

The study was conducted at government hospital for mental care , Andhra medical college , Visakhapatnam With a study sample consisting of 100 consecutive male patients, who were diagnosed according to ICD-10 criteria for research [6] as mental and behavioural disorders due to alcohol use -dependence syndrome currently in with or without uncomplicated/complicated withdrawal and admitted in deaddiction ward at government hospital for mental care, Visakhapatnam during a period of 3months from march to may 2019.

Inclusion criteria:
• Age 18 to 60
• The patients who had given written informed consent
• The patients who are diagnosed to be mental and behavioural disorders due to use of alcohol-dependence syndrome-with or without complicated/uncomplicated withdrawal.

Exclusion criteria:
• H/o head trauma
• Mental retardation
• Patients meeting international classification of diseases-10 criteria for drug dependence other than alcohol
• Patients diagnosed with organic psychosis
• Patients who are not given consent for study.

Operational procedure:

Patients fulfilling the inclusion criteria were taken up for the study . These cases were enrolled after taking informed consent from them to be included in the study.After taking detailed history and mental status evaluation a diagnosis of mental and behavioural disorders due to use of alcohol-dependence syndrome-with or without complicated/uncomplicated withdrawal was confirmed according to international classification of diseases-10 research criteria[9].Among these patients 10 patients dropped out in between the study (4 patients absconded from ward and 4patients discharged immediately after detoxification on request &2patients had taken alcohol during the hospital stay),hence a total of 90 subjects were retained & followed up to 3weeks in this study.

Study tools:

1.Semi-structured Proforma : it is self-designed proforma which includes socio-demographic data and others like age at first intake of alcohol, age at dependence, duration of abstinence, relapses, history of jaundice, liver function test abnormalities, neurological and medical complications associated with dependence were included in it.

2. International classification of diseases-10 research criteria[9]

3. Severity of alcohol dependence questionnaire (SADQ)-which consisted of five sections - physical withdrawal, affective withdrawal, withdrawal relief, typical daily consumption, and the morning after two days heavy drinking following at least four weeks of abstinence. Items in the first four sections used a 4-point scale (almost never, sometimes, often, or nearly always). The last section employed a severity scale.The instrument had good reliability and validity.

4. WHO Quality of life QOL-BREF Scale-is a 26-item multiple choice questionnaire.

It assesses a quality of life profile consisting of four domains i.e. physical, psychological, social, and environmental. There are also two items that are examined separately, Question 1 asks about an individual's overall perception of quality of life, and question 2 asks about an individual's overall perception of their health

Internal consistency measured by Cronbach's alpha score is high: 0.82 (domain one), 0.81 (domain two), 0.68 (domain three), and 0.80 (domain four) and it has good reliability and validity.

The participants were explained that the study aimed at assessing drinking parameters, psychological and physical health domains, and the severity of alcohol dependence.

The assessments would include answering questionnaires, undergoing laboratory investigations, attending group sessions, receiving medication, and involvement of family members/caregivers in the treatment plan.Base line severity of dependence and QOL were assessed by using Severity of alcohol dependence questionnaire

(SADQ), WHO Quality of life QOL-BREF Scale and followed up to 3weeks to assess QOL again after detoxification.

Routine laboratory investigations including liver function tests were performed.the subjects with deranged liver function tests and evidence of liver disease were referred to gastroenterology department along with on-going detoxification.The subjects were detoxified using benzodiazepines, vitamin tablets, injectable thiamine administration; pharmacological treatment for medical co-morbidities had been done.Psycho-education and counselling sessions for study subjects and family members were given in the form of group sessions regarding of harmful effects of alcohol, medical complications, craving and relapse prevention and were held twice in a week.It was emphasized in the psycho educative group sessions that patients need to be involved in alternate coping strategies and healthy lifestyles.

Statistical analysis:

Statistical analysis of the data was carried out using SPSS software version 23.0.Mean and standard deviation were presented for all continuous variables.Comparison between the baseline and 3 weeks QOL domain scores of study subjects was carried out using paired *t*-test.Pearson correlation coefficients were used to examine the relationship between disease severity and QOL domain scores of the study subjects.Chi-square statistics were applied to examine the relationship between various sociodemographic variables and disease severity.

IV. Results

Characteristics of the study population:

The mean age of the total study population (N=90)males is 31.2yrs(SD-10.138).the study population had a mean age of onset at first drink was 20.4yr(SD-4.30) and mean age of onset of dependence was at 29.3yr(SD-7.4).Among the study population 75.6%(n=68)of the patients were currently married, 13.3%(n=12)were separated from their spouses, and 2.2%(n=2) were divorced.53.3%(n=48) were hailing from urban background and remaining 46.6%(n=42)were from rural background. 17.8% of the patients were unskilled labourers, 4.4% were semiskilled labourers, 8.9%were skilled labourers and 48.8% of the patients were unemployed. Majority of study population were illiterate 68.9% and 31.1% were literates. 57.7%(n=52)patients were belonging to lower socioeconomic status followed by 24.4% were belonging to lower middle,13.3%middle,2% each of upper middle and upper class respectively.

73.3 %(n=66) of the patients had family history of alcohol intake in first degree relatives. Among the study population 24.4% had a history of jaundice, 13.3% had history neurological complications like polyneuropathy, ataxia and 13.3% had elevated liver function tests.

84.4%(n=44) patients belonging to lower socio-economic status were having severe dependence for alcohol which was statistically significant with p-value -0.019, 90.9%(n= 60)of patients with family history of alcohol drinking in first degree relatives were observed to having severe alcohol dependence based on SADQ score, which was statistically significant with p-value-0.031 and91% patients with history of jaundice had severe dependence on SADQ score which was statistically significant with p-value-0.009.

Quality of life before and after intervention:

The mean scores on WHO QOL-BREF were improved significantly when compared at the baseline and three weeks of follow up in all domains of quality of life, which were statistically highly significant(p-0.000) [Table 1&figure1]In our study, the Physical and psychological domains of QOL were improved significantly after three weeks of withdrawal programme.In our study, patients had base line scores with lowest score on social domain (10.00, SD 2.81) followed by physical domain (12.47, SD 1.96) which followed by psychological domain (14.18, SD 2.08) and highest on environment domain (27.27, SD 19.33).

Table 1.

DOMAIN	Mean +/_(SD)	T	df	Sig (2 tailed)
Physical				
Baseline	12.47(1.96)	-55.043	89	.000
3 weeks after	25.84(1.30)			
Psychological		-20.563	89	.000
Baseline	14.18(2.08)			
3 weeks after	18.82(1.59)			
Social		-6.985	89	.000
Baseline	10.00(2.81)			
3 weeks after	11.67(3.03)			
Environment		19.330	89	.000
Baseline	27.27(2.01)			
3 weeks after	22.58(3.00)			

Relationship between severity of dependence and QOL:

Severity of dependence based on SADQ severity score divided into two groups ,one with mild to moderately dependent(SADQ <30) and others were severely dependent(SADQ >=30) and were assessed with different baseline domains of QOL using independent sample t-test.In our study, On independent t-test there was no significant relationship between all domains of QOL and severity of alcohol dependence, however equality of variance(levene's test)was proved statistically significant between severity of dependence and physical and social domain scores of QOL(p-0.026&0.014 respectively) (Table 2 & 3).

Table 2 .

Independent Samples Test			
		Levene's Test for Equality of Variances	
		F	Sig.
PHYSICAL D1 BEFORE	>=30	5.160	.026
	< 30		
PSYCH BEFORE	>=30	.026	.872
	<30		
SOCIAL BEFORE	>=30	6.337	.014
	<30		
ENV BEFORE	>=30	.038	.845
	<30		

Table 3.

| Independent Samples Test				
		t-test for Equality of Means		
		t	df	Sig. (2-tailed)
PHYSICALHEALTH BEFORE	Equal variances assumed	1.035	88	.304
	Equal variances not assumed	1.805	8.012	.109
PSYCH BEFORE	Equal variances assumed	-.189	88	.851
	Equal variances not assumed	-.210	5.951	.841
SOCIAL BEFORE	Equal variances assumed	1.513	88	.134
	Equal variances not assumed	.879	5.202	.418
ENV BEFORE	Equal variances assumed	-.917	88	.362
	Equal variances not assumed	-.957	5.817	.377
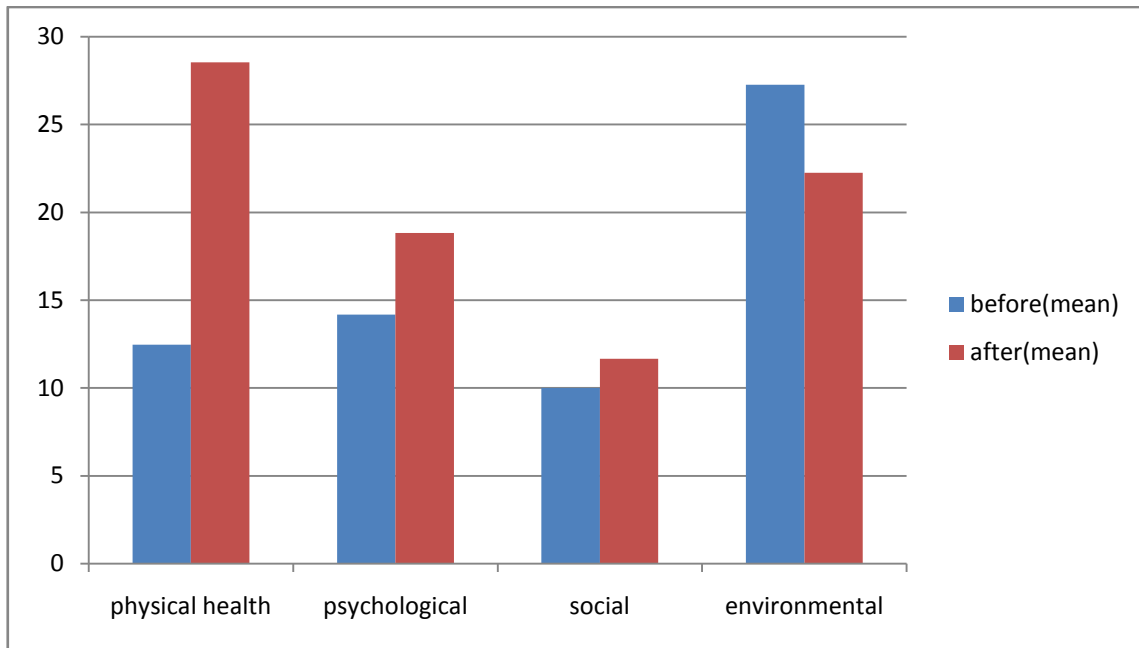
Figure 1

Relationship between age at first drink and age of dependence with severity of dependence for alcohol:
There was a negative correlation between age at first drink & severity of alcohol dependence which was statistically significant($r=-0.259$, $p-0.014$) and negative correlation was also seen between age of onset of dependence & severity of alcohol dependence, without statistical significance ($r=-0.036$, $p-0.734$). There was a negative correlation between severity of alcohol dependence and physical health domain of QOL, which was not significant statistically($r=-0.047$, $p-0.660$)(Table 4 and Figure 1).

Table 4

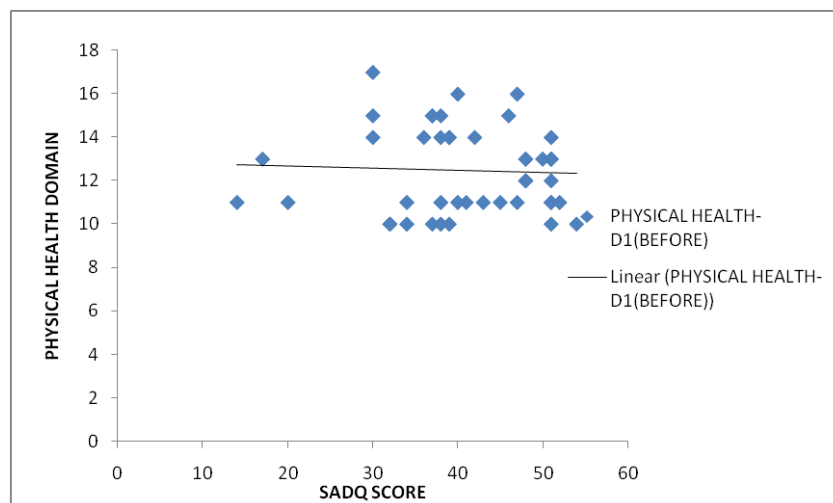| Correlations		SADQSCORE	AGEATFIRST DRINKyears	AGEATDEPE NDENCEyear s
SADQSCORE	Pearson Correlation	1	-.259*	-.036
	Sig. (2-tailed)		.014	.734
	N	90	90	90

Figure 2

V. Discussion

The mean age of our study population was31.2yrs(SD+/_10.138), was much lower than the studies done by Dutta R. etal[15], Chikkerahally.etal[16], the mean age's the subjects in their studies were 37.2 years and 39.08yrs respectively.

The mean age at first drink and onset of dependence in our study was 20.4yr(SD-4.30) &29.3yr(SD-7.4),which were nearer to the findings of studies done by Ganesh kumar.S.etal[17],chikkerahally.etal[16],

In our study, findings showed there was no significant association between various sociodemographic variables and severity of alcohol dependence except for low socioeconomic status. This may indicate that males who are bread winners of family having high perceived stress and anxiety with dissatisfaction and lack of social support may be associated with excessive alcohol use

In our study, family history of alcohol drinking in first degree relatives was significantly associated with severity of alcohol dependence, this may indicate strong genetic predisposition for alcohol dependence

In our study, the QOL improved significantly in all the domains after 3 weeks of inpatient withdrawal programme. Similar findings were observed in studies done by Lahmek P.etal[18], Foster H.etal[19].In our study, the Physical and psychological domains of QOL were improved significantly than the other domains after three weeks of withdrawal programme. This may be due to several factors such as effective control of withdrawal symptoms, the effective management of medical complications using Liaison services in a tertiary care hospital at our institute, feedback about deranged liver function tests and other medical complications associated with excessive alcohol drinking during counselling sessions.The regular presence of close family members during the intervention encourages patients to adhere to treatment. Along with this, group therapies, motivation enhancement therapies provide improvement in all domains of quality of life of subjects.

Our study had showed a significant relationship between severity of dependence and physical and social domain scores of QOL ,which were significantly improved after 3 weeks of intervention.These findings were similar to the findings of Lahmek P.etal[18],in his study showed that there was increase in Physical and Mental Component Summary scores during hospitalisation.In our study there was a negative correlation between age at first drink & severity of alcohol dependence, which was statistically significant, this finding may suggests that the earlier the age of onset of first drink, there will be severe dependence, which may further effects the quality of life of an individual.In our study there was a negative correlation between severity of alcohol dependence and physical health domain of QOL,which was not significant statstically,these findings are similar to the findings of Srivastava and Bhatia.etal[1]

Strengths of the study:

Study was done at tertiary care psychiatry hospital andone of the few prospective studies done on QOL during inpatient treatmentDone in patients who were admitted deaddiction ward, which was kept away from general psychiatry ward for treating alcohol dependent patients.

Limitations of the study:

The study sample was small; a larger sample would have been more accurate. Longer duration of follow-up should have been done to study other variables like relapses, coping skills, factors responsible for relapses..etc.

VI. Conclusion

The present study found poor quality of life in alcohol-dependent patients before treatment Initiation. These findings of the study may suggest that inpatient treatment along with psychoeducation to patient and caregiver may improve patients QOL in all domains.Also found that there was a negative correlation between age at first drink, age at dependence with severity of dependence for alcohol. The improved QOL enables the patients to regain their work and take up other responsibilities and this also enhances the self-esteem and achieves complete abstinence. Finally there was a need to create general awareness in public that alcohol dependence is a disorder that requires immediate attention and by reducing the burden of the disease on society.

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