Scholars Journal of Applied Medical Sciences (SJAMS)
Abbreviated Key Title: Sch. J. App. Med. Sci.
ISSN 2320-6691 (Online)
ISSN 2347-954X (Print)

A Unit of Scholars Academic and Scientific Society, India
www.saspublishers.com

Psychiatry

To Study the Quality of Life and Its Correlates among Alcohol Dependent Subjects: A Study from a Tertiary Care Centre

Dr. Gurmeet Kaur Brar[1*], Dr Sumit Pal Singh Chawla[2], Dr. Ravinder Garg[3], Dr. Mamta Bahetra[4], Ms. Harkomal Sharma[5]

[1]Assistant professor, Department of Psychiatry.GGS Medical College and Hospital, Faridkot, India
[2]Assistant Professor, Department of Medicine GGS Medical College and Hospital, Faridkot, India
[3]Professor & Head, Department of Medicine GGS Medical College and Hospital, Faridkot, India
[4]Assistant professor (Clinical Psychology), Department of Psychiatry, GGS Medical College and Hospital, Faridkot India
[5]Research Analyst, Department of Psychiatry, GGS Medical College and Hospital, Faridkot, India

Original Research Article

***Corresponding author**
Dr. Gurmeet Kaur Brar

Article History
Received: 01.02.2018
Accepted: 15.02.2018
Published: 20.02.2018

DOI:
10.36347/sjams.2018.v06i02.020

Abstract: In drug addiction research, quality of life assessment is done for several reasons because addiction to illicit drugs is a cluster of physiological, behavioural, and cognitive phenomena which can damage individual's physical and mental health, role performance, and social adaptation. The aim of this study was to evaluate the changes in the quality of life (QoL) in 65 patients of alcohol dependence, aged 18-45 years, over a period of six months and compare it with QoL of 120 age and gender matched healthy controls using World Health Organization Quality of Life instrument (WHOQoL BREF) and Severity of alcohol dependence was also assessed using SAD-Q. Patients admitted for study underwent pharmacological treatment as required .Non pharmacological intervention in the form of weekly psycho-education session for the first month and monthly thereafter for next 6 months period was given by psychiatric social worker/ psychiatrist. A substantial improvement was observed in the QoL of patients with alcohol dependence over a span of six months follow up. The mean score of all 4 domains of the QoL in alcohol dependent subjects were very low before the treatment initiation at baseline. The regular follow-up and support of the care givers enables the patients to achieve complete abstinence, improving their quality of life.
Keywords: Alcohol dependence, abstinence, quality of life.

INTRODUCTION

The ICD-10 defines the dependence syndrome as being a cluster of physiological, behavioural, and cognitive phenomena in which the use of a substance or a class of substances takes on a much higher priority for a given individual than other behaviours that once had greater value [1].

Quality of life (QoL) is defined as "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. It is a broad concept, incorporating in a complex way the persons' physical health, psychological state, level of independence, social relations, personal beliefs, and relationship to salient features of the environment" (WHO,1996). Assessment of QoL has multiple uses in health care ranging from optimal planning for person centered clinical care; as an outcome measure in clinical trials and health services research; for assessment of health needs of populations; and for prioritizing resource allocation. QoL measures involve two primary dimensions- physical and mental functioning. World Health Report 2002 showed that 8.9% of the total burden of diseases worldwide is due to abuse of psychoactive substances, which include tobacco, alcohol, cannabis and other illicit drugs of abuse [2]. 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 [3], alcohol use disorders accounted for 1.4% of the disease burden worldwide. Alcohol consumption causes 3.2% of deaths worldwide (1.8 million) and accounts for 4.0% of the disability-adjusted life years lost (58.3 million).The scenario in India itself is not very different. In north India, the one-year prevalence of alcohol use lies between 25 and 40% among the general population, whereas in south India, this rate is between 30 and 50%. In southern India, alcohol use is more

among people of lower socio-economic status and those with lower educational level [4]. A large-scale survey involving 32,000 people in 2001 in India found alcohol usage rates between 20 to 38% among males and 10% among females [5]. Males having higher perceived stress and anxiety with dissatisfaction and poor QoL, lack of social support, economic strains, and chronic stress, are more prone to the harmful consequences of alcohol [6-8]. In another study conducted in 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 [9]. Although alcohol abuse is a major cause of morbidity and mortality and an important health care burden, the QoL of alcohol abusing subjects has not been widely studied till date. The important factors in the QoL of alcohol dependent subjects are psychiatric comorbidity, social environment and disturbed sleep. Although multiple studies have reported the prevalence figures of alcohol abuse disorders, very few have assessed the quality of life in alcohol dependent subjects in a methodological manner, hence this study was undertaken to assess the changes in quality of life in alcohol dependent subjects prospectively over six months period of treatment starting from the baseline.

MATERIALS AND METHODS

The present study was conducted in the De-addiction centre of a tertiary care teaching hospital of Punjab, over a period of 6 months. The study population consisted of 65 male patients aged 18 to 45 years suffering from alcohol dependence according to ICD-10 criteria. All the patients suffering from alcohol dependence, who were not in intoxicated state, were requested to participate in the study after taking informed consent. Approval for the study was obtained from the Ethics Committee of the institution. The enrolled patients were assessed using appropriate scales and investigations.

120 healthy subjects who were age- and gender- matched with the study subjects and had no significant findings on physical examination and investigations were taken as control. Exclusion criteria consisted of patients with a history of bipolar disorder, schizophrenia or any psychotic disorder, epilepsy or any organic mental disorder, any non-stable physical disease and multiple drug abuse. World Health Organization Quality of Life instrument (WHOQoL BREF- Hindi version), a 26-item questionnaire and Severity of Alcohol Dependence Questionnaire (SADQ) were administered to all study subjects and controls at the start of the study, then at 3 months and 6 months follow-up.

WHOQoL-BREF [10] is a generic scale, its primary aim being to assess one's subjective perception of his or her QoL. WHOQoL-BREF includes 26 items; 24 items cover the four main domains such as physical health (physical state), psychological health (cognitive and affective state), social function (interpersonal relationships and social roles in life) and environmental (relationships with the environment). Two items include the satisfaction of overall health. The physical domain includes three facets: pain and discomfort; energy and fatigue; and sleep and rest. The psychological domain includes five facets: positive feelings; negative feelings; learning and concentration; body image; and self-esteem. The social domain includes three facets: personal relationship; practical social support; and sexual activity. The environmental domain includes five facets: financial resources; healthcare availability; opportunities for acquiring new information and skills; opportunities for leisure; and transport. A higher score indicates better QoL. A pilot study by Da Salva Lima *et al.* [11] demonstrated that WHOQoL-BREF is a valid instrument for the assessment of quality of life in patients with alcohol dependence.

The SADQ [12] is a short, self-administered; 20-item questionnaire was developed by the Addiction Research Unit at the Maudesley Hospital to measure severity of dependence on alcohol.

Patients admitted for study underwent pharmacological treatment using benzodiazepines, vitamin tablets and anti-craving agents as required. Non pharmacological intervention in the form of weekly psycho-education session for the first month and monthly thereafter for the next 6 months period was given by psychiatric social worker/ psychiatrist available. Motivational intervention and MET (Motivational Enhancement Therapy) was provided by clinical psychologist at weekly intervals if required. All the socio-demographic data, positive findings on physical examination and lab investigations were entered into the performa prepared for the study. Telephonic contact with the caregivers was ensured. Caregivers were explained the differences between a lapse and a relapse.

Socio-demographic data which included age, gender, marital status, occupation, and education level, monthly income of the patient and his family and religion were noted from each participant. The details about alcohol use included severity of dependence, duration of use, quantity, type and frequency of alcohol used per day in the month prior to admission. The data collected also included relevant treatment history, previous attempts at abstinence, family history, and personal history. Findings on general physical and psychiatric examinations were carefully noted.

RESULTS

Characteristics of the participants under study

65 participants were recruited into the study and 7 patients dropped out of the study after their first visit due to their unavoidable personal circumstances. Mean ± SD of age of participants (n=58) was 37.9 ± 7.42 years. Most of them were married (89.8%) and

62.5% suffered from liver disease due to alcohol. The Mean ± SD of duration of treatment and primary/secondary education was 6.85 ± 4.12 years and 12.17 ± 6.13 years respectively. The Mean ± SD alcohol consumption was 172gms ± 165gms daily. Out of the 65 patients, 42% had monthly income of less than 5000 rupees, 30.6% between 5000 and 10000 rupees and 27.4% had more than 10000 rupees.

QoL in alcohol dependence participants

As per the findings, there is no correlation between severity of alcohol dependence (SAD-Q) scores and domain scores of WHOQoL-BREF at 6 months of follow up (physical domain: r= -0.21, p= 0.2; psychological domain: r= -0.16, p= 0.14; social domain: r= -0.05, p= 0.75; environmental domain: r= -0.29, p=0.7).

The paired t-test was used to compare the mean scores of all 4 domains of WHOQoL-BREF before and after intervention. There was a significant difference between mean scores of WHOQoL-BREF at baseline, 3 months and 6 months, in all 4 domains after treatment [Table 1,2,3].

The unpaired t-test was applied to compare the mean scores of alcohol dependant group and control group. There was a significant difference between mean scores of all 4 domains of WHOQoL-BREF in alcohol dependant patients (n=58) and healthy controls (n=120) at baseline [Table 4].

Predictive factors for QoL

Alcohol liver disease is a good predictor of improvement in psychological and social domain scores of QoL. Rest none of the factors studied showed any significant impact on QoL [Table 5].

Table-1: Comparison of Mean scores in all domains of WHOQoL-BREF, at baseline and 3 months using paired t-test

DOMAIN	MEAN (±SD)	T	Df	P VALUE
Physical				
Baseline	21.43±4.10			
3 Months	25.16±2.43	-10.58	57	0.000
Psychological				
Baseline	18.43±4.11			
3 Months	22.16±2.43	-10.58	57	0.000
Social				
Baseline	9.86±3.80			
3 Months	11.72±3.30	-12.71	57	0.000
Environment				
Baseline	22.43±4.30			
3 Months	26.16±2.10	-9.80	57	0.000

*p value<0.05, is considered significant

Table-2: Comparison of Mean scores in all domains of WHOQoL-BREF, at baseline and 6 months using paired t-test

DOMAIN	MEAN (±SD)	T	Df	P VALUE
Physical				
Baseline	21.43±4.11			
6 Months	28.16±2.95	-11.90	57	0.000
Psychological				
Baseline	18.43±4.11			
6 Months	25.16±2.73	-11.70	57	0.000
Social				
Baseline	9.86±3.80			
6 Months	13.57±3.40	-15.24	57	0.000
Environment				
Baseline	22.43±4.30			
6 Months	29.16±2.70	-11.10	57	0.000

*p value<0.05, is considered significant

Table-3: Comparison of Mean scores in all domains of WHOQoL-BREF, at 3 months and 6 months using paired t-test

DOMAIN	MEAN (±SD)	T	Df	P VALUE
Physical				
3 months	25.16±2.43			
6 Months	28.16±2.95	-9.64	57	0.000
Psychological				
3 months	22.16±2.43			
6 Months	25.16±2.73	-9.89	57	0.000
Social				
3 months	11.72±3.30			
6 Months	13.57±3.40	-9.35	57	0.000
Environment				
3 months	26.16±2.10			
6 Months	29.16±2.70	-9.46	57	0.000

*p value<0.05, is considered significant

Table-4: Comparison of mean scores in all domains of WHOQoL-BREF (n=58) in alcohol dependent patients with healthy controls (n=120) using unpaired t-test

Domain Alcohol Dependance	Patients (N=58) Mean (±SD)	Healthy Control (N=120) Mean (±SD)	T	Df	P Value
Physical	21.43±4.11	23.57±4.03	-3.28	176	0.001
Psychological	18.43±4.11	20.68±4.23	-3.42	176	0.001
Social Relations	9.86±3.80	11.90±3.40	-3.37	176	0.001
Environment	22.43±4.30	24.68±4.72	-3.42	176	0.001

*p value<0.05, is considered significant

Table-5: Association between improvement of WHOQoL domains at baseline and 6 months follow up

DOMAIN	ODDS RATIO	@ 95% CI	P VALUE
PSYCHOLOGICAL:			
Alcoholic liver disease	0.253	(0.08,0.91)	0.027
Severity of Alcohol Dependence	1.04	(0.94,1.08)	0.226
Psychosocial consequences	1.018	(0.83,1.23)	0.776
SOCIAL:			
Psychiatric Co-Morbidity	0.74	(0.37,1.59)	0.446
Severity of Alcohol Dependence	0.95	(0.91,1.02)	0.205
Duration of regular drinking (years)	1.06	(0.96,1.087)	0.184
Alcohol liver disease	0.258	(0.076,0.813)	0.02

*p value<0.05, is considered significant

DISCUSSION

As seen in the previous studies using a variety of parameters to measure QoL, our study elicited substantial impairment in QoL in all the domain scores in alcohol dependent patients before treatment initiation [13,14]. The domain scores on WHOQoL scale were substantially lower in patients with alcohol dependence as compared to healthy controls, which was also observed in another Indian study by Pal *et al.*[15].

Improvement in psychological and social domains of WHOQoL was associated with improvement in status of alcoholic liver disease. QoL improved significantly in all the domains when the subjects took pharmacological e.g.: anti-craving agents and non-pharmacological treatment, e.g: motivational enhancement techniques (MET). This has also been reported by few studies held previously [16-19].

As per the results of the study, it was seen that there is further improvement in the domain scores of WHOQoL, as the duration of treatment increases from 3 months to 6 months.

Strength of the study

This study elicited that quality of life in patients with alcohol dependence can be improved with minimum resources in developing nations like ours. The involvement of family, counseling and social support in the management of alcohol dependent subjects plays a pivotal role in maintaining abstinence and ensuring adherence. Moreover, standardized and valid instruments with minimal and relevant clinical investigations were utilized in this study to reach at the above results.

Limitations of the study

It was a single centre study with a small sample size and had a shorter duration of follow up (6 months). A longer duration of abstinence and follow ups would have shed more light on the impact of other treatment related variables.

CONCLUSION

From our study it can be concluded that quality of life was found to be poor in alcohol dependent patients before starting any intervention. Ensuring regular follow-up and treatment adherence in OPD setting improves patient compliance and enables these patients to pursue their work normally and carry out household responsibilities better. The findings of the study stresses upon the need of health care system to incorporate quality of life as a tool for evaluation of treatment outcome in alcoholics.

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