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Original Research Article

A cross sectional comparative study of quality of life of treatments seekers at de-addiction centre in central India using WHO BREF scale

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ABSTRACT

Background: Substance use disorders (SUDs) are a major global health problem affecting quality of life of human being. It has major impact on physical, psychological, social and environmental aspect of life. The aim is to assess Quality of Life (QoL) of persons seeking treatment at de-addiction centre by comparing it with those not seeking treatment, using WHOQOL BREF scale.
Methods: A cross sectional comparative study is done on 250 persons admitted and seeking treatment at de-addiction centre during August 2014 to December 2015. A five-point scale rated WHOQOL-BREF questionnaire was used to assess quality of life.
Results: Majority of study participants (85.60%) rated their quality of life as poor when compared to comparison group who rated their quality of life as good (52.80%). Majority of study participants (82.80%) were dissatisfied with their health. It was observed that the mean score of the physical, psychological, social and environmental domain in the study group was significantly lower in study group when compared to comparison group ($p<0.001$).
Conclusions: Substance abuse had detrimental effect on the physical, social, psychological and environmental domain affecting their overall health and quality of life.

Keywords: De-addiction centre, Quality of life, Substance abuse, WHOQOL BREF

INTRODUCTION

Substance use disorders (SUDs) are a major global health problem affecting quality of life of human being. Substance abuse has emerged as a serious concern, adversely affecting the physical and socio-economic well-being. Substance abuse is a complex medico-social problem, which has various social, cultural, biological, geographical, historical and economic aspects. The processes of industrialization, urbanization and migration have led to loosening of the traditional methods of social control rendering an individual vulnerable to the stresses and strains of modern life. World Health Organization (WHO), however, defines Quality of Life (QoL) as 'individual's perception of their position in life in context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns'.[1]

This definition highlights QOL as a subjective self-report from the individual which is not based on reports or judgment from others (e.g. family members, clinicians). QOL is also multi-dimensional, incorporating positive (e.g. feeling happy, contented, energetic) as well as negative aspects (e.g. not having pain, sadness, sexual difficulties). QOL questionnaire aims to assess the extent to which significant aspects of a person's life have been affected, rather than what symptoms and disabilities are present.[2]

Assessing Quality of Life helps us to focus beyond patient's sign and symptom and provides comprehensive and compatible guide for appropriate management strategies and for evaluating intervention effects such as the effect of medicine. It also helps to sensitize the medical professionals and health care staff to think rationally about the physical and co-morbid psychiatric illnesses affecting the patient's quality of life. WHO's initiative to develop a quality of life assessment arises from a need for a genuinely international measure of quality of life and a commitment to the continued promotion of an holistic approach to health and health care.[1]

Though there has been few studies conducted on substance abuse affecting quality of life, there is no substantial data on this subject. There is a future scope for conducting various studies on this subject.

Aim and objectives

1. To study socio-demographic profile of persons seeking treatment at de-addiction centre.
2. To assess Quality of Life of persons seeking treatment at de-addiction centre.

METHODS

Participants and procedures

The Hospital Ethics Committee of Indira Gandhi Govt Medical College has approved this study. All participants (n=250) were recruited from a de-addiction centre, non-governmental organisation in central India, and based on the international classification of disease (ICD-10) classification of mental and behavioural disorders: clinical descriptions and diagnostic guidelines, were diagnosed with substance dependence by qualified psychiatrists.[3] After they had expressed willingness to participate, each participant filled out and signed an informed consent; completed a structured questionnaire, including demographic data, information about substance use, and the WHOQOLBREF scale.

The de-addiction centre where the study was conducted has provision for treatment of only male patients; hence females were not included in the study. A cross-sectional study was conducted during August 2014 to December 2016. A purposive sampling technique was used to select the study participants randomly. Those patients admitted in the de-addiction centre for the duration of less than 4 week were included in the study as per selection criteria of WHOBREF scale.

Determination of sample size

As per substance/drug abuse monitoring system (DAMS), United Nation Office on substance and crime, alcohol is most commonly used substance in Maharashtra.[4] As per NFHS- 4 data (2015-16) report, prevalence of alcohol consumption among adults (men) in Maharashtra is 20.5%.[5]

Assuming 95% confidence interval and 0.05 level of significance, the minimum sample size required for the study was 250, using formula

$n=p\ (1-p)\ z^2/$ (margin of error)^2; p=0.205, z=1.96 and margin of error= 0.05

$$= \frac{(1.96)^2(0.205)\ (0.795)}{(0.05)^2} = 250$$

250 comparison group was taken from general population with ratio of 1:1 with study participants.

Total sample size- 500.

Data was collected on pre-tested semi-structured questionnaire by interviewing every patient in a room to ensure confidentiality. Data was collected regarding socio-demographic variables like age, address, education, religion, occupation, marital status, socio-economic status, and type of drug being abused, and Quality of life determinants includes domains- physical, psychological, social and environmental.

Quality of life by WHOQOL- BREF.

The WHOQOL-BREF questionnaire is a shorter 26-item version of the WHOQOL-100. All items are rated on a five-point scale (1-5). The scale has been shown to have good discriminant validity, sound content validity and good test-retest reliability. All domains display excellent internal consistency. The comparative fit index (CFI) of all the domains was found to be 0.901 which is acceptable (CFI> 0.9 is considered to be a good degree of fit).[2]

The questionnaire assesses the experienced certain things in last two weeks period before the study. The recognition of the multidimensional nature of QoL in the WHOQOL-BREF is based on a four-domain structure:

1. Physical health activities of daily living;
2. Psychological bodily image and appearance;
3. Social and personal relationships;
4. Environmental-financial resources.

Scoring the WHOQOL-BREF

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. The four domain scores denote an individual's perception of quality of life in each particular domain. Domain scores are scaled in a positive direction (i.e. higher scores denote higher quality of life). The mean score of items within each domain is used to calculate the domain score. A

method for the manual calculation of individual scores and to convert domain scores to a 0-100 scale is provided in WHOQOL-BREF assessment form.[1]

Data analysis

Data which collected in the questionnaire were entered and analysed in Epi Info software version 7.2.[6] Categorical data was analysed by means of mean, standard deviation and quantitative data by proportion and percentage. The group differences were tested using chi-square, unpaired t-tests, or others depending on the type of variable. P<0.05 was considered to derive a level of significance.

RESULTS

Majority of the participants were in the age group of 25 to 44 years (middle adulthood) with mean (±S.D) age of 31.52 (±8.17) years. Most of the substance user started first use of the primary substance use at the mean age of 18.51 (±4.46) years. Majority (68.40%) of study participants belongs to Hindu religion and 62.40% of the participants were single (unmarried /separated/ divorced). Most of the cases belong to nuclear families (78.40%). Majority (65%) of the participants were educated beyond metric level. Majority of study participants (92.50%) were reported to be from middle to upper socio economic class (Table 1).

Table 1: Socio-demographic variables of study participants.

Variable		Study subjects n=250 N (%)	Comparison group n=250 N (%)
Age (years)	15-24	58 (23.20)	58 (23.20)
	25-44	173 (69.20)	173 (69.20)
	45-65	19 (7.60)	19 (7.60)
Marital Status	Single (unmarried/separated/divorced)	156 (62.40)	105 (42.0)
	Married	94 (37.60)	145 (58.0)
Type of family	Nuclear	196 (78.40)	158 (63.20)
	Non nuclear	54 (21.60)	92 (36.80)
Religion	Hindu	171 (68.4)	176 (70.40)
	Non- hindu	79 (31.6)	74 (29.6)
Socio economic status*	Upper (I)	107 (42.8)	94 (37.60)
	Upper middle(II)	88 (35.2)	87 (34.8)
	Lower middle (III)	37 (14.8)	24 (9.6)
	Upper lower(IV)	14 (5.6)	42 (16.8)
	Lower (V)	4 (1.6)	3 (1.2)
Residential area	Urban	136 (54.40)	186 (74.40)
	Rural	114 (45.60)	64 (25.60)
Occupation	Unskilled	34 (13.60)	62 (24.8)
	Semiskilled	88 (35.20)	81 (32.4)
	Skilled	42 (16.80)	44 (17.6)
	Professional	21 (8.40)	20 (8.0)
	Student	33 (13.20)	35 (14.0)
	Unemployed	32 (12.80)	8 (3.20)

Table 2: Distribution of study participants according to substance of use/ dependence.

Type of substance*	Study group (n=250)	Comparison group (n=250)
	Number (%)	**Number (%)**
Alcohol	240 (96)	52 (20.80)
Opioids	37 (14.80)	1 (0.40)
Cannabinoids	64 (25.60)	8 (3.20)
Sedative hypnotic	20 (8.0)	00
Cocaine	1 (0.40)	00
Tobacco	214 (85.60)	56 (22.40)
Volatile substance	7 (2.80%)	00

Table 3: Distribution of study subjects according to self rating of quality of life.

Self rating QOL	Study group	Comparison group
	Number (%)	Number (%)
Poor	214 (85.60)	75 (30.0)
Neither good nor poor	8 (3.20)	43 (17.20)
Good	28 (11.20)	132 (52.80)
Total	250 (100)	250 (100)

Table 4: Distribution of study subjects according to self rating of their health.

Self rating of health	Study group	Comparison group
	Number (%)	Number (%)
Dissatisfied	207 (82.80)	34 (13.60)
Neither Dissatisfied nor Satisfied	09 (3.60)	21 (8.40)
Satisfied	34 (13.60)	195 (78.0)
Total	250 (100)	250 (100)

Table 5: Distribution of study subjects according to WHO quality of life domain score.

Domain	Study group	Comparison group	P value
	Mean (S.D)	Mean (S.D)	Unpaired 't' test
Physical	34.39 (±19.68)	78.7 (±12.51)	<0.001
Psychological	35.11 (±17.55)	73.8 (±11.65)	<0.001
Social	47.52 (±23.45)	74.22 (±9.51)	<0.001
Environmental	50.88 (±16.75)	70.11 (±11.70)	<0.001

Alcohol and tobacco were the most common substances abused. The prevalence of alcohol and tobacco was found to be 96% and 85.60% in study group as compared to 20.80% and 22.40% in comparison group (Table 2).

Majority of participants in the study group rated their quality of life as poor (85.60%) while in comparison group 52.80% rated their quality of life as good. Thus, the self-rating of quality of life was significantly poor among study group participants (Table 3). Majority of participants in the study group were dissatisfied (82.80%) with their health and 78% were satisfied with their health in comparison group. It was observed that the study group participants were significantly dissatisfied with their health status (Table 4). In study group, the mean of the physical, psychological, social and environmental domain were 34.39 (±19.68), 35.11 (±17.55), 47.52 (±23.45) and 50.88 (±16.75) respectively. In comparison group, the mean of the physical, psychological, social and environmental domain were 78.7 (±12.51), 73.8 (±11.65), 74.22 (±9.51) and 70.11 (±11.70) respectively. It was observed that the mean score of the physical, psychological, social and environmental domain in the study group was significantly lower in study group when compared to comparison group ($p<0.001$) (Table 5).

DISCUSSION

Substance use disorders (SUDs) being a major global health problem, continues to be a major threat to public health in India. The problem of substance use is becoming serious day by day, due to varied reasons. Worldwide there is rising trend in the number of people who resort to substance abuse at an early age. In present study, most of the substance user started taking drugs between the ages of 15 to 25 years with the mean age at first use of the primary substance use was 18.51 (±4.46) years which was found similar in other studies.[7,8]

In the present study, majority of the participants were in the age group of 25 to 44 years (middle adulthood) with mean (±S.D) age of 31.52 (±8.17) years. The findings are comparable to findings of other studies.[9-18] In the present study, majority (62.40%) of the participants were single (unmarried/separated/divorced). This finding was similar with other studies conducted around the different part of the country.[11,17,19] This reveals that those who are alone had more vulnerability to fall for substance use/abuse to support themselves.

Most of the patients belonged to nuclear families (78.40%) and urban localities, which may be a reflection of the increase in urbanisation, accessibility to treatment or a true prevalence of substance abuse in urban population. The findings were in line to other studies.[13,16,17,21] This does not rule out those living in joint family. The various studies in different Indian setting showed that even individuals from joint families are involved in substance abuse.

In the present study, majority (65%) of the participants were educated beyond metric level. This finding were comparable to other studies.[13,15,16,20] In the present study 26% of the participants were students or unemployed, similar to the findings of other studies.[7,11,12,16,17] Student or unemployed people are more curious to use the substance and easily get influenced by peer groups. In various studies it was observed that students have opportunity of movement from one place to another and they receive monetary assistance from family for educational purpose. Instead of using that money for educational purpose, it might have been used for substance use/ abuse. Male college students, being young adults, are inherently at a risk of recreational substance use and the stress which is associated with present day education is likely to be a predisposing and a perpetuating factor for addictive behaviour.

Majority of study participants (92.50%) were reported to be from middle to upper socio economic class. The findings were corroborates with findings of Venkatesh et al.[13] The reason may be the paid services provided by de-addiction agency and those who can afford the service were the participants of the present study. This also indicates the fact that the young individuals from affluent class of the society had sufficient money to afford the cost of substance. But on the contrary, the various studies showed that the prevalence of substance abuse was also higher among the poor socio economic strata of the community, found in the various studies as in Dadwani et al and Arora et al.[7,20]

Alcohol and tobacco were the most common substances abused. The prevalence of alcohol and tobacco was found to be 96% and 85.60% in study group as compared to 20.80% and 22.40% in comparison group.

The assessment of QoL is now acknowledged as a central component of health care and healthcare research. QoL measures are needed to be more routinely included in the evaluation of treatments. QoL focuses upon respondents' "perceived" QoL and reflects the effects of disease on QoL. Therefore the results in presents study indicated that the participants in study group perceived poor quality in all the domains as compared to those in comparison group. Self-reported information obtained from QoL questionnaires enables us to understand the total burden of treatment experienced by drug-dependent persons.

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