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Full Length Research Paper

Quality of life and its correlates among substance dependent subjects: A study from a tertiary care centre in northeastern part of India

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Substance Abuse is a worldwide problem that causes various sequelae, which severely affect physical and mental health, social and daily life. Quality of Life (QOL) is increasingly recognized as an important outcome measure in treatment studies and for service evaluation. This study assessed the QOL in Alcohol Dependent (AD) and Opioids dependent (OD) and compared the same with a control group (NC). It was further aimed to study the relationship between QOL and specified socio-demographic characteristic features across the three groups. A cross-sectional assessment of the three groups of subjects was made. AD and OD subjects not in active withdrawal or intoxication phase were included in the study, the third group included the normal controls. QOL assessment was made with the World Health Organization-QOL-Bref Hindi version. The comparison of the various domains in QOL was done by applying ANOVA test. All the domains of well-being on the basis of WHOQOL scale revealed a significant difference when compared to the normal controls. In order to assess the effect of socio-economic variables on the quality of life we applied the multiple linear regression analysis. The results did not show any difference across the three groups. The study indicates that opioid dependent and alcohol dependent subjects experience a lower QOL when compared with the normal group, however when the opioid group was compared to the alcohol dependent group there was a lower QOL in the OD group. Social Support scores also had no significant effect on any domains of QOL in both the OD and AD groups.

Key word: Drug dependence, quality of life (QOL), World Health Organization, quality of life (WHOQOL-Brief), social support.

INTRODUCTION

Quality of life (QOL) is defined as individual's" 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 ranging 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 the health needs of populations; and for prioritizing resource allocation (Laudet and White, 2000). In drug addiction research the examination of QOL is done for several reasons because addiction to illicit drugs is a cluster of physiological, behavioral, and cognitive

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phenomena which can damage the individuals' physical and mental health, role performance, and social adaptation (Albrecht and Fitzpatrik,1994).

QOL measures involve two primary dimensions- physical and mental functioning (Foster et.al., 1999). Examining the level of QOL provides knowledge of substance users' subjective perspectives of their impairment in a multidimensional view of their lives. Second, substance-using behavior is a chronic relapsing problem that is difficult to cure. Assessments of the impact of substance use on QOL are important for decisions about how aggressively the problematic behavior should be treated, and for assessing the health needs of patients, and allocation of resources. Third, QOL has been acknowledged as an important prognostic variable in the evaluation of the effects and outcome of treatment for substance use (Mayer et.al., 2010). Since social support has positive influence on management and prognosis of drug dependent individuals, it is an area which needs a detailed and close examination (Foster, Peters and Marshall, 2000).

World Health Report 2002 (WHO, 2002) shows that 8.9% of total burden of disease worldwide is due to abuse of psychoactive substances, which include tobacco, alcohol and illicit drugs. Globally, approximately 39 deaths per 100 000 population are attributable to alcohol and illicit drug use, out of which 35 deaths are attributable to alcohol use, and four deaths to illicit drug use. These figures give an indication of the magnitude of problem. Multiple studies (Domingo-Salvany et al., 2010: Chuan and Storr, 2006:Yen, 2001) have reported the prevalence figures but very few have assessed the QOL in a methodological manner, hence this study was planned to assess the QOL in alcohol dependent and opioid dependent subjects and compare the same with a normal control group. It was further aimed to study the relationship between QOL and specific socio-demographic characteristics along with the social support system.

MATERIALS AND METHODS

Subjects

The sample comprised three groups of 30 subjects each, aged 18–60 years. The three groups were: opioid dependence (OD), alcohol dependence (AD) and normal controls (NC). The patient groups (i.e. OD and AD) were recruited from the De-addiction clinic, Department of Psychiatry of a tertiary care hospital situated in the city of Varanasi.The hospital is a nodal multi specialty referral centre catering to a huge catchment area of northern Uttar Pradesh, Bihar, Jharkhand, Nepal, Northern Orissa and some parts of West Bengal. The subjects were diagnosed according to the ICD-10[WHO,1972] criteria, by the consultant psychiatrist in-charge of the de-addiction clinic. Subjects in active withdrawal state, or having co-morbid psychiatric
illnesses and any other substance abuse were excluded. Normal control group comprised of subjects who were age sex matched and were taken from staff and students of the hospital or distant relatives of the patients attending the walk-in –clinic of the hospital. The normal group included persons whose current psychiatric status was 'normal' as indicated by a score of ≤ 3 on the Hindi version of General Health Questionnaire-12(GHQ-12) (Goldberg and William,1972:Gautam,Nijhawanand Kamal,1987).

Instruments

All subjects were administered the specially designed semi-structured socio-demographic proforma, clinical profile sheet and the following scales:

WHOQOL-Brief Hindi version (Chandiramani et.al,1988) World Health Organization Quality of Life- Brief version was chosen because it is a generic scale with a broad multinational and multicultural base (India was one of the participating countries), and also because its primary aim is to assess one's subjective perception of his or her QOL.WHOQOL-Brief 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 to salient features of 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 feeling; 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 Likert 5-point scale is used for each question. A higher score indicates better QOL.

Social Support Questionnaire (SSQ): This scale is an Indian adaptation, in Hindi language (Nehra et al., 1998), of the Pollack and Harris scale (Pollack and Harris, 1993) to measure the perceived social support. It has 18 items; a higher score indicates more perceived social support. The items in the scale refer to help, concern, support, reinforcement and criticism that a person gets from one's family, friends, social acquaintances and working colleagues. It is a robust instrument in terms of both consistency and stability of scores. It can be used in a variety of situations where the perceived social support is required as an independent, dependent or intervening variable. It has a test–retest reliability of 0.59 and correlation with clinician's assessment at 0.80.

General Health Questionnaire (GHQ-12): The GHQ-12

(Goldberg, 1972) has been translated into Hindi by Shiv Gautam et al. (1987). This is a 12-item self-administered questionnaire used extensively in clinical practice to measure changes in non-psychotic psychiatric status over the past month. There are four possible responses to each question, which were scored 0-0-1-1. A score of ≤ 3 is the cut-off point for ``psychiatric distress''.

Assessment

Data was collected on the basis of a single cross-sectional assessment interview of the subjects who fulfilled the required inclusion and exclusion criteria and provided written informed consent. All the subjects were then administered the socio-demographic proforma, clinical profile sheet, WHOQOL-Brief (Chandiramani et.al., 1988) Hindi version and SSQ (Nehra et al., 1987). The normal control group was assessed on the basis of GHQ (Gautam et al., 1987).

RESULT

Our study included three groups alcohol dependence (AD), opioid dependence (OD), and Normal Controls (NC), 30 subjects were included in each group. Table 1 shows the socio-demographic characteristics of the three groups. The AD group comprised exclusively of males, OD had 2(6.7 %) females. The groups were identical in their age distribution i.e. mean of age in three categories are respectively 37(AD), 36(OD), 32 (NC). Mean age at onset of substance dependence ranged from 21 years (AD), to 24years (OD). Age wise distribution revealed that majority of the subjects belonged to above 30 years age group (80% in AD, 66.7% in OD). The majority of our sample was married. Socio-economic and professional distribution revealed that most of the sample was employed in a meaningful manner. 26% were either students or unemployed in the AD group and 16% in OD group. The majority of our experimental groups were educated (82% of AD group was educated above primary level and 73% of OD group). The majority of OD group and AD group belonged to Hindu religion. The sample belonged to higher to middle income group and most of the subjects hailed from joint families. The subjects were equally divided into rural and urban setup. In table 2 the comparison of the various domains in QOL is depicted on the basis of ANOVA test. All the domains of well-being on the basis of WHOQOL score show significant difference (f values). For assessment of pairs of groups showing significant difference we further did a post-hoc analysis .The post hoc test (LSD) gives the pairs of significant factors for each domain of quality of life as depicted in Table-2. To assess the effect of socio-economic variables on the quality of life we applied multiple linear regression analysis. The effect of socio-demographic variables like age, sex, occupation, marital status, family history on the four domain of QOL is shown in Table 3. It was found that there was no significant correlation regarding the QOL domains and the socio demographic variables.

DISCUSSION

Our aim was to assess the quality of life in subjects of alcohol dependence and opioid dependence and compare it with that of normal. The data of 30 subjects belonging to the three groups OD, AD and NC were analyzed, and it was found that QOL in alcohol and opioid dependence was lower than that of normal controls. Across the two groups i.e. AD and OD there was no difference across the various domains of QOL, however when the variables were compared to NC group there was a statistically significant difference in three out of five domains and also in the total scores of QOL, which were higher in NC than the experimental groups (AD and OD).The correlation with socio-demographic factors did not reveal any difference among the groups.

The QOL is a robust indicator for the need for management and intervention (WHO, 2002). The assessment of QOL also serves as a marker of the management programme. Studies have independently assessed QOL in alcohol dependence and opioid dependence (Chuan et al., 2006) and have reported a significant poorer quality of life. Our study has also given a similar result. In our study we combined the two groups of substance dependent subjects as we wanted to look at the difference, if any, across two major groups of dependence producing substances. Alcohol as a substance has cross cultural acceptance and dependence is either ignored or reported later (WHO, 2002) On the other hand opioid addiction is associated with social stigma and gross impairment in functioning (Malhotra, Dhawan, prakash et al., 2002). Our results point to a significantly low QOL scores, but there is not much difference across the OD and AD groups, meaning that the phenomenon of dependence is morbid while the nature of substance is not of much importance (Malhotra, Dhawan, prakash et al., 2002::Barber and Crisp, 21995). Independent studies on single groups that is, either alcohol (Laudet et al., 2011: Vanderplast et al., 19999: Mayer et al. 2010:meyer et al., 2000) or opioid dependence (Maeyer et al., 2010:Domingo salvany, 2010:Yen et al., 2001) have come up with similar conclusion as ours, but our search did not reveal any study taking multiple groups as our study has done.

Our study as regards to opioid dependence gives a similar result to the study by Yen et al, 2010. Our study was done in a walk-in-de-addiction set up while the above study was done in the methadone set up. There are other studies (Singh, Sharan, Basu, 2005) dual diagnosis and have reported a poorer QOL in subjects having substance abuse along with bipolar affective

Table 1. Comparison of socio-demographic characteristics of Subjects in Alcohol Dependence (AD), Opioid Dependence (OD) and normal control (NC) groups.

Variables	Alcohol Dependence (AD)		Opioid Dependence (OD)		Normal Control (NC)		Chi-squire/F value(df)
	Mean± SD		Mean±SD		Mean±SD		
Age	37.0+7.24	2	36.30+10.5724		32.33+9.448		
Age at onset(yrs)	1.63+4.359		.37+5.744				
	N	%	N	%	N	%	
Gender							
Male	30	100	28	93.3	30	100	4.091(2)
Female			02	6.7			
Age group							
Upto 30 Year	06	20	10	33.3	17	56.7	8.900(2)
Above 30 Year	24	80	20	66.7	13	43.3	
Marital Status							
Single	04	13.3	06	20	10	33.3	5.583(2)
Married	26	86.7	24	80	20	66.7	
Occupation							
Professional/Semi-professional	03	10.0	03	10.0	05	16.7	9.909(6)
Clerical/shop-owner/farmer	16	53.3	10	33.3	10	33.3	
Skilled/semi-skilled/unskilled worker	03	10.0	12	40.0	06	20.0	
Unemployed/retired/student	08	26.7	05	16.7	09	30.0	
Education							
Upto Middle(8^{th}	05	16.7	08	26.7	05	16.7	1.713(4)
Upto 10+2	11	36.7	11	36.7	10	33.3	
Graduate & above	14	46.7	11	36.7	15	50.0	
Religion							
Hindu	30	100	27	90.0	29	96.7	3.663(2)
Muslim	00	00	03	10.0	01	3.3	
Socio-economic Status							
Upper class	00	00	01	3.3	0	00	4.801(6)
Upper Middle Class	19	63.3	14	46.7	13	43.3	
Lower middle Class	07	23.3	10	33.3	12	40.0	
Upper Lower Class	04	13.3	05	16.7	05	16.7	
Types of Family							
Joint	18	60.0	16	53.3	16	53.3	8.827(2)
Nuclear	12	40.0	14	46.7	14	46.7	
Locality							
Urban	17	56.7	24	80.0	14	46.7	7.387(2)
Rural	13	43.3	06	20.0	16	53.3	

disorder and also those having a single diagnosis of substance abuse. Our study also highlights this observation on doing a linear regression to determine the significant variable; our study did not show a total significant difference across groups. Individual assessment of the variables showed that the type of substance abuse had a positive correlation to physical and psychological well being (Chaturvedi et al, 1997); this is an obvious finding since complications are likely to develop in substance dependence. The occupational status was also positively correlated to psychological health domain. This finding probably indicates that a

Table 2. Comparison of Quality of Life in Alcohol Dependence, Opioid Dependence and Normal Control.

Domain	Alcohol Dependence (AD)-I Mean±SD	Opioid Dependence (OD)-II Mean±SD	Normal(Healthy Control)-III Mean±SD	F-value (df=2, 87)	Post hoc test (LSD)
General Well-being	5.17±1.533	4.50±1.656	7.77± .898	45.464*	II,III I,III
Physical Health	23.17±2.588	20.23±4.057	27.27±3.373	32.528*	I,II II,III I,III
Psychological Health	17.50±3.511	14.60±3.223	22.20±3.078	41.128*	I,II II,III I,III
Social relationships	9.03±1.866	8.07±2.599	11.33±1.936	18.125*	I,III II,III
Environment	25.43±3.692	21.90±4.978	28.20±4.874	14.436*	I,II II,III I,III
Total WHO-QOL-Brief Score	80.30±9.374	69.23±13.302	96.77±11.467	43.591*	I,II II,III I,III

* F Value are significant.

Table 3. Correlation of Quality of Life with clinical, socio-demographic And social support variables in Substance Dependence.

Variables	Physical domain				Psychological domain			
	Estimate	95% CI		P	Estimate	95% CI		P
Age group	-2.284	-6.406	1.838	.270	-2.432	-6.399	1.535	.223
Marital Status	2.988	-3.566	9.542	.363	-3.283	-1.961	10.654	.172
Occupation	-2.069	-5.057	.919	.170	.901	-5.762	-.011	.049
Education	-.412	-2.222	1.399	.649	-.342	-2.085	1.400	.694
Religion	-1.290	-6.700	4.121	.633	-3.365	-8.572	1.842	.199
Socio-economic status	-.165	-2.149	1.819	.868	.123	-1.787	2.033	.897
Type of family	-1.373	-3.570	.824	.214	-1.307	-3.422	.807	.219
Locality	.943	-.551	2.437	.210	1.386	-.051	2.824	.058
Type of drug	-3.816	-6.027	-1.604	.001	-3.534	-5.662	-1.406	.002
Duration of Use(Yrs)	-.151	-.352	.049	.134	-.105	-.298	.088	.278
Family history	.941	-1.338	3.220	.410	1.088	-1.664	2.722	.629
Social Support	.027	-.133	.187	.735	-.085	-.239	.069	.269
R Square		.133				.181		

Table 3. Correlation of Quality of Life with clinical, socio-demographic and social support variables in Substance Dependence.

Variables	Social relationships				Environment domain			
	Estimate	95% CI		P	Estimate	95% CI		P
Age group	-.217	-2.885	2.451	.870	.384	-4.711	5.479	.880
Marital Status	.062	-4.180	4.305	.976	4.214	-3.887	12.315	.300
Occupation	-1.312	-3.246	.622	.178	1.305	-2.388	4.998	.480
Education	.288	-.884	1.459	.623	.201	-2.037	2.439	.857
Religion	-1.976	-5.478	1.526	.261	-6.050	-12.738	.638	.075
Socio-economic status	.698	-.586	1.983	.279	-2.124	-4.577	.328	.088
Type of family	-.709	-2.131	.713	.320	-1.890	-4.605	.825	.168
Locality	-.130	-1.097	.837	.787	-.512	-3.537	2.513	.734
Type of drug	-.658	-2.090	.773	.359	-2.627	-5.360	.106	.059
Duration of Use(Yrs)	.040	-.090	.169	.542	-.102	-.349	.145	.410
Family history	.509	-.967	1.984	.491	-.173	-2.990	2.644	.902
Social Support	.070	-.033	.174	.177	-.131	-.329	.066	.187
R Square	.064				.185			

well established occupational status leads to a lower stress level. This observation could not be correlated as no comparable studies could be found in the literature search. It has been noticed in an Indian study that social support may influence motivation, treatment compliance and outcome in drug dependent patients, our study also found that QOL was related to perceived social support.

Our study has tried to look at an important aspect of QOL in two major categories of substance abuse. We found that similar studies are lacking. Our study gives some predictable results, however it throws light on the poorQOL in substance dependence irrespective of the type of substance, it also shows that a secure financial status has a protective role. Our study is probably one of the initial few studies to compare two forms of addiction. Since substance dependence has multiple etiologies, its management has a multidisciplinary approach (Heslin et.al., 2011). For a holistic management of these individuals we need to look at various aspects of the individual's life.

Our study has certain limitations. Our sample was a clinic based sample, which may differ on certain variables from that of the community or specialty de-addiction and rehabilitation set ups. In specialty set ups very serious cases would be included, in contrast to the community set up where a large variety of case could have made the conclusions robust. Very serious and complicated cases may be over included or missed in our present subject population. Among the wide variety of addictive substances our study focused only on two groups of substances for comparison. We would suggest that future studies may be community based, with larger sample size and may include other groups of substance dependence.

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