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COMPARATIVE STUDY OF THE PSYCHOPATHOLOGY, QUALITY OF LIFE AND CAREGIVER BURDEN IN CAREGIVERS OF ALCOHOL USE DISORDER VERSUS OTHER SUBSTANCE USE DISORDERS (OTHER THAN ALCOHOL)

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ABSTRACT

Background: The families of alcohol use disorder patients, especially the spouses, have increased risk of stressful life events, medical and psychiatric disorders, and greater use of medical care services. Present study was aimed to compare psychopathology, quality of life and caregiver burden in caregivers of alcohol use disorder versus other substance use disorders (other than alcohol). **Material and Methods:** Present study was cross-sectional, observational study, conducted in caregivers of patients of Substance Use Disorders underwent GHQ12 for screening of psychopathology, ZARIT BURDEN QUETIONNAIRE to assess burden in caregivers and WHOQOL BREF for assessing quality of life. **Results:** Caregivers of alcohol use disorder had more caregiver burden compared to caregivers of other substance use disorders. However, there was no significant difference (p value >0.01) found when burden was compared with types of substance used (alcohol and other substance). We found significant difference in the caregiver's burden among two genders. Women caregivers had more burden when compared with men caregivers. Quality of Life was impacted among caregivers in both the groups, more in other substance use disorders than alcohol use disorder. However, there was no significant difference found in quality of life among the two groups. Quality of life was significantly more affected among women caregivers as c compared to men. The effect was seen in all four domains. There was a positive co-relation found between psychopathology and caregiver burden. Caregiver burden impacts positively in psychopathology of caregivers. There was a negative co-relation seen between three domains of WHO QOL and caregiver burden. Caregiver burden impacts negatively in all domains of QOL. **Conclusion:** There was more psychopathology among caregivers of non-alcohol use disorders as compared to caregivers of alcohol use disorder. However, there was no significant difference found in the psychopathology among the two groups.

Keywords: psychopathology, caregivers, alcohol use disorders, quality of Life

INTRODUCTION

Family is the key resource in the care of patients including those with mental illness in India. This has been attributed to the Indian tradition of inter-dependence, and the concern of

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close relatives in adversity, as also to the paucity of mental health professionals.[1] The family caregivers are those who provide care to other family members who need supervision or assistance in illness or disability or those who provide unpaid care to the family members with special needs.[2,3]

The families of alcohol use disorder patients, especially the spouses, have increased risk of stressful life events, medical and psychiatric disorders, and greater use of medical care services.[4,5] A study shows that wives of substance-dependent patients suffer substantial burden as a result of caregiving and various factors contribute to it; education playing an important role in reducing the burden.[5] Thus, it is very important for health care professionals to identify the needs of the caregiver/s and develop healthy coping strategies so as to reduce the burden.

Spouses of patients of alcohol use disorder are known to be exposed to high rates of domestic violence, which could be physical, verbal or sexual.[6] Low marital satisfaction[7], maladaptive coping skills[8] and poor social support[4] in addition to economic burden[9] and social stigma, are the other major issues among the spouses. Though significant levels of psychological distress seem to be apparent from such factors, surprisingly very few studies have specifically explored this, in both Western as well as Indian research. Those studies, which have looked into these factors have found high rates of psychiatric morbidity[10,11], especially mood and anxiety disorders in the spouses. Present study was aimed to compare psychopathology, quality of life and caregiver burden in caregivers of alcohol use disorder versus other substance use disorders (other than alcohol).

MATERIAL AND METHODS

Present study was cross-sectional, observational study, conducted in Deaddiction Centre of Department of Psychiatry of a General Municipal Corporation Hospital. Study duration was of 1 year (September 2018 to August 2019). A utilizing devised and validated questionnaires was initiated after taking permission from the Institutional Ethics Committee and written informed consent of the patient.

Inclusion criteria of caregivers

- Caregivers of patients of substance use disorders diagnosed by Consultant Psychiatrist, age group 18-50 years. (both genders), should be living, sharing kitchen, bed, taking care of patients in daily activity for more than 1 year.

Exclusion criteria for caregivers

- Known case of psychiatric illness in the past.
- Those not consenting to participate in the study.
- Inability to communicate with the researcher or to complete questionnaire.

INCLUSION CRITERIA FOR PATIENTS

1. Those diagnosed as alcohol use disorder and other substance use disorder in the OPD (with Nicotine dependence in both groups).

EXCLUSION CRIETERIA OF PATIENTS

1. Subject having other psychiatric co-morbidity diagnosed by DSM 5 criteria by consultant psychiatrist. (A problematic pattern of substance use leading to significant impairment or distress as manifested by at least two of the followings, occurring within 12 months period)
2. Substance is often taken in larger amounts or over a longer period of time than was intended.
3. There is a persistent desire or unsuccessful efforts to cut down or control substance use.
4. A great deal of time is spent in activities necessary to obtain substance, use substance or recover from its effects.

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5. Craving, or a strong desire or urge to use substance.
6. Recurrent substance use resulting in failure to fulfill major role obligations at work, school or home.
7. Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by effects of substance.
8. Important social, occupational or recreational activities are given up or reduced because of substance use.
9. Recurrent substance use in situations which are physically hazardous.
10. Substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by substance.
11. Tolerance, as defined by either of the following:

(a) A need of markedly increased amounts of substance to achieve intoxication or desired effects.

(b) A markedly diminished effect with continued use of the same amount of substance.

1. Withdrawal, as manifested by either of following:

(a) The characteristic withdrawal syndrome of substance.

(b) Same substance or closely related substance is taken to relieve or avoid withdrawal symptoms. Substance use disorder is further specified as mild, moderate or severe depending on the number of criteria met.

A Semi-structured pro forma was used to document socio-demographic data of the caregivers like age, sex, education, occupation, income etc. After applying the inclusion and exclusion criteria and taking informed consent, 200 caregivers (100 of alcohol +100 of other than alcohol) were enrolled in the study and interviewed for 40-45 minutes. During the interview, they were asked details about their patients and noted on the Case Record Form. Then they were administered GHQ12 for screening of psychopathology, ZARIT BURDEN QUETIONNAIRE to assess burden in caregivers and WHOQOL BREF for assessing quality of life. Those having a score >3 on GHQ 12 were further clinically assessed as per DSM 5 criteria to diagnose any Psychiatric disorder and if needed, were referred for treatment.

SPSS 18.0 was applied for statistical analysis. All the independent variables were analyzed by using descriptive statistics. Data was expressed as mean and standard deviation. Descriptive statistics were used to determine categorical variables. T test and Mann Whitney was applied for statistical analysis wherever applicable.

RESULTS

In our study, the sample consisted of 200 caregivers: 100 of alcohol use disorder and 100 of other substance use disorder. Out of the 200 caregivers, 55 belonged to the age- group 18-32 years and 145 caregivers belonged to 33-50 years age group. The mean age of the sample was 38.35 ± 8.57 years. The youngest were 18 years old, while 50-year old candidates were the eldest in the study sample. In our sample, majority (78%) were females & 22% were males. Thus, Females were more as compared to males.

Table 1: General characteristics of caregivers

Characteristics	Number of caregivers	Percentage
Age group (in years)		
18 – 32	55	27.5
33 – 50	145	72.5
Mean age (years)	38.35 ± 8.57	
Gender		

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Males	44	22
Females	156	78
Relationship with patient		
Wife	85	42.5
Mother	52	26
Father	22	11
Brother	20	10
Sister	19	9.5
Husband	2	1
Education		
Illiterate	40	20
Primary	92	46
Secondary	44	22
Higher secondary	21	10.5
Post Graduate	3	1.5
EMPLOYMENT STATUS		
Currently employed	94	47
Currently unemployed	106	53

In a sample of 200 patients with substance use disorder, 89 were in the range of 18 to 30 years whereas most were in age group ranging between 30 - 60 years. The mean age of patients was found to be 33.35 with standard deviation of 10.52 yrs.

Table 2: General characteristics of patients

Characteristics	**Number of patients**	**Percentage**
Age group (in years)		
18 – 30	89	44.5
30 – 60	111	55.5
Mean age (years)	33.35 ± 10.52	
Substance used by patient		
Alcohol	100	50
Other than alcohol (cannabis, opioids, stimulants, BZPs etc.)	100 (cannabis-53, opiods-22, stimulants-14, BZPS - 11)	50

When caregivers were assessed as per GHQ 12, 186 caregivers had score less than or equal to 30 and 14 had score more than 30.

Table 3: General health questionnaire 12

GHQ12 Score	**Number of caregivers**	**Percentage**
Less than or equal to 30	186	93
More than 30	14	7

Among 200 caregivers, 186 caregivers had score less than or equal to 30 in which 94 were caregivers of alcohol use disorders and 92 were other substance use disorders. 14 caregivers had score more than 30 in which 6 were caregivers of alcohol use disorder and 8 were other substance use disorders. GHQ 12 score more than 30 indicates psychopathology. Hence 14 caregivers had psychopathology, it was found to be more among caregivers of other substance

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use disorders than alcohol use disorder.

We found mean GHQ 12 score in caregivers of alcohol use disorder as 25.08 and caregivers of other substance use disorders as 25.56. Caregivers of other substance use disorders had a higher GHQ 12 score compared to caregivers of alcohol use disorder. Two tailed P value was 0.41 (>0.01) which was not statistically significant, t value was found to be 0.81 and degree of freedom was 198. Difference between the two groups was not statistically significant

Table 4: Comparison of psychopathology of caregivers of alcohol vs other substance use disorder

GHQ12 Score	ALCOHOL	OTHER SUDS
Less than or equal to 30	94	92
More than 30	6	8
Mean Score	25.08 ±4.21	25.56 ± 4.08

In our sample of 200 caregivers, we found that 46% caregivers had mild to moderate burden, 11% had moderate to severe burden while 3% experienced severe caregiver burden because of substance abuse by their close ones. However, 40% reported no caregiver burden.

Table 5: Caregiver burden

Caregiver burden score	Number of caregivers
0-21 (no burden)	80 (40%)
21-40 (mild to moderate burden)	92 (46%)
41-60 (moderate to severe burden)	22 (11%)
61-88 (severe burden)	6 (3%)

We found that 26% of caregivers of alcohol use disorder and 20% of caregivers of other substance use disorder had mild to moderate burden, 11% had moderate to severe burden in both groups while 2% of caregivers of alcohol use disorder and 1% of other substance use disorder experienced severe caregiver burden. There was more burden found among caregivers of alcohol use disorder than caregivers of other substance use disorder.

We found that the mean caregiver burden score in caregivers of alcohol use disorder was 27.50 and caregivers of other substance use disorder was 24.93. Caregivers of alcohol use disorder had more caregiver burden compared to caregivers of other substance use disorder. We found two tailed P value was >0.01 which was not statistically significant, t value was 1.54 and degree of freedom was198. Hence, there was no significant difference found between the two groups in the study.

Table 6: Comparison of caregiver burden among alcohol use disorder and other substance use disorder

Zarit burden score	Alcohol	Other SUDS
0-21 (no burden)	33(16.5%)	47(23.5%)
21-40 (mild to moderate burden)	52(26%)	40(20%)
41-60 (moderate to severe burden)	11(5.5%)	11(5.5%)
61-88 (severe burden)	4(2%)	2(1%)
Mean score	27.50 ± 12.53	24.93 ± 10.96

We found that the mean caregiver burden score in women caregivers was 27.68 and men caregivers was 21.20. Women caregivers had more caregiver burden score as compared to men caregivers. To know if the two groups of women and men caregivers had significantly different

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caregiver burden score, we applied the T Test. We found two tailed P value was <0.0001, which was statistically significant. Hence, there was significant difference found amongst the caregiver burden among men and women caregivers in our study.

Table 7: Comparison of caregiver burden among women caregivers and men caregivers

	MEN (Mean ± SD)	WOMEN (Mean ± SD)	P value
Zarit Burden	21.20 ± 6.53	27.68 ± 12.44	*0.0011

We compared QOL of caregivers in alcohol use disorder and other substance use disorder in all four domains physical, psychological, social and environmental, of WHO QOL BREF. We found mean QOL scores in caregivers of alcohol use disorder as physical 22.51, psychological 19.72, social 10.72 and environmental 28.17 and caregivers of other substance use disorders as physical 23.31, psychological 20.40, social 11.30 and environmental 27.96. Caregivers of other substance use disorder had higher score on physical, psychological and social domains of QOL as compared to caregivers of alcohol use disorder. Caregivers of alcohol use disorder had a higher score than caregivers of other substance use disorder in environmental domain. The two tailed P-value in all domain was >0.01 which was not statistically significant. Hence, there was no significant difference found among quality of life in caregivers of alcohol use disorder and other substance use disorder in the study.

Table 8: Comparison of quality of life among caregivers of alcohol and caregivers of other substance use disorder

DOMAINS	ALCOHOL (Mean ± SD)	OTHER SUDS (Mean ± SD)	P- value (Mann Whitney)
PHYSICAL	22.51 ± 7.061	23.31 ± 7.127	0.4455
PSYCHOLOGICAL	19.72 ± 6.48	20.40 ± 6.58	0.4871
SOCIAL	10.72 ± 3.27	11.30 ± 5.22	0.8449
ENVIRONMENTAL	28.17 ± 8.86	27.96 ± 7.60	0.9380

To know if the two groups of women and men caregivers had significantly different WHO QOL BREF scores, we applied Mann Whitney U Test. We found two tailed P value was <0.0001, which was statistically significant in four domains. Hence, there was significant difference found in the Quality of Life in two groups in our study. Quality of Life was affected more in women caregivers than men in all domains (physical, psychological, social and environmental) of QOL.

Table 9: Comparison of quality of life among women caregivers and men caregivers

DOMAINS	MEN (Mean ± SD)	WOMEN (Mean ± SD)	P value
PHYSICAL	27.47 ± 5.90	21.65 ± 6.86	<0.0001*
PSYCHOLOGICAL	24.22 ± 5.06	18.91 ± 6.41	<0.0001*
SOCIAL	12.70 ± 4.43	10.53 ± 4.14	0.0009*
ENVIRONMENTAL	33.15 ± 5.94	29.91 ± 8.021	<0.0001*

*P-value is significant.

There was a positive correlation between GHQ 12 scores and caregiver burden scores. Thus, as caregiver burden increased, psychopathology also increased.

Table 10: Correlation of psychopathology and caregiver burden

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	Spearman r	P value	Correlation
GHQ 12 scores	0.02962	0.6764	*POSITIVE*

There was a negative correlation between Zarit burden scores and all the 4 domains of quality of life with statistically significant P value in all domains except social domain of WHO BREF quality of life. Thus, as the caregiver burden increased, quality of life in all domains decreased.

Table 11: Correlation of caregiver burden and quality of life

	Spearman r	P value	correlation
Physical	-0.5768	<* 0.0001	*NEGATIVE*
Psychological	-0.6073	<* 0.0001	*NEGATIVE*
Social	-0.0899	>0.001	*NEGATIVE*
Environmental	-0.6106	< *0.0001	*NEGATIVE*

*P value is significant

DISCUSSION

As there is a dearth of literature in India comparing mental health and quality of life of caregivers of patients with substance use disorder, results of the present study are striking and have potential implications for future research.

The mean age of the study sample was 38.35 years with range of age of the sample between 18 to 50 years. There were 55 caregivers in 18-32 years age group and 155 parents were in 32-45 years age group. The middle-aged population (n=155) was comparatively more than the young adults (n=41). in study by Sharma *et al.*,[12] maximum number of the caretakers (34%) were of the age group 42–54 years with mean age 45.85 ± 12.92

In our study 42.5% of the caregivers were the wives of the patient followed by mothers (26%) & fathers (11%). Thus, parents contributed to being 37% of caregiver population in total. Remaining were brothers (10%), sisters (9.5%) and husbands (1%) whereas Sharma *et al.*,[11] noted that maximum (35.3%) of the caretakers were mothers followed by 49 wives (32.7%), followed by 38 fathers (25.3%) and 10 other relatives (6.7%).

In sample of 200 patients with substance use disorder, 89 were in age range of 18 to 30 years whereas most were in age group ranging between 30-60 years. The mean age of patients was found to be 33.35 ± 10.52 years. However, Sharma *et al.*,[11] noted that majority of the patients (56.7%) belonged to age group 18–30 years. A higher mean age of patients (38.7 years) with SD 8.9 was noted by Shekhawat *et al.*,[13]

In present study, caregivers were assessed as per GHQ12 for screening of psychopathology, 186 caregivers had score less than or equal to 30, whereas 14 had score more than 30, in which 6 were caregivers of alcohol use disorder and 8 were caregivers of other substance use disorder.

Biegel *et al.*,[14] found depressive symptomatology in 39% of caregivers being at risk for clinical depression. Gohil *et al.*,[15] had found that out of 110 caregivers of alcohol dependent patients, 78 caregivers (70.9%) had psychiatric morbidity. They found that 40 caregivers (36%) were having dysthymia, 24 caregivers (22%) were having major depressive disorder, 9 caregivers (8%) were having unspecified anxiety disorder and 5 caregivers (4.5%) were having generalized anxiety disorder. Similar findings were noted in present study.

In our sample of 200 caregivers, we found that 46 % caregivers had mild to moderate burden which was more in caregivers of alcohol use patients (26%) as compared to caregivers of other substance use patients (20%), 11% had moderate to severe burden while 3%

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experienced severe caregiver burden because of substance abuse by their close ones. Difference between the two groups (caregivers of alcohol use disorder and other substance use disorder) were statistically not significant. However, 40% reported no caregiver burden.

Sharma *et al.*,[12] found that 34.7% of caretakers perceived "objective burden" in patients of substance use disorders. Objective burden was a subscale of family burden interview schedule, which had financial burden, disruption of routine activities, disruption of family leisure and disruption of family interaction, physical health and mental health items.

Shyangwa *-et- al.*[16] reported severe objective burden (56%) more commonly than moderate objective burden. An earlier Indian study by Surendra K Mattoo *et al.*,[17] on 120 caregivers in India , comparing burden on caregivers of alcohol and opioid- dependent patients also found moderate to severe burden in 95%-100% of all caregivers.

There was a significant difference found among the caregiver burden and gender of caregiver in the study. Women caregivers had more caregiver burden compared to men caregivers. Similar findings were noted in a study by Sharma *et al.*,[12] on family burden in substance dependence, that higher proportions of severe burden were reported in female caregivers.

Mattoo *et al.*,[17] *et al.* concluded that family burden was not dependent on the gender of caregivers. This was not in keeping with our findings. Nebhinani *et al.*,[18] *et al.* studied 80 caregivers burden in injecting versus non-injecting opioid use disorders and found that all caregivers reported a moderate or severe burden.

In our study we found that caregivers of other substance use disorder had higher score on physical, psychological and social domains of QOL compared to caregivers of alcohol use disorders. Caregivers of alcohol use disorders had more score than caregiver of other substance use disorder in environmental domain. We found that difference between these two groups (caregivers of alcohol use disorder and caregivers of other substance use disorder) were statistically not significant.

Most studies are focused on caregivers of alcohol dependent patients though caregivers of other substance use disorders have a compromised quality of life according to Miranda *et al.*,[19] studied QOL in 109 caregivers of drug dependent patients and found that they had greater impairment of QOL compared to caregivers of gastroenterology patients. Sattar *et al.*,[20] also stated that there was compromised QOL among caregivers of alcohol use geriatric patients.

In our study there was a significant difference found in the Quality of Life across the gender of caregivers. Quality of Life was affected more in women caregivers than men in all domains (physical, psychological, social and environmental) of QOL.

Caregivers of alcohol and other substance use disorders suffer from psychopathology and have an impairment in physical, psychological, social and environmental domains of quality of life. All caregivers of substance use disorders carry a fair amount of caregiver burden irrespective of type of substance use.

To deal with this, adequate referral services are necessary for management. Caregivers should be psycho educated about the course and prognosis of illness. This will help in reducing stress and burden of caregivers. Stress management training of caregivers will improve their quality of life. All caregivers should be trained professionally in caregiving.

Caretaker group therapy can be started at Deaddiction and Rehabilitation Centers so that we can address their concerns. Their problems can be solved with the help of experienced caregivers and mental health professionals. Most importantly, health care professionals should screen caregivers for any psychiatric illness and give treatment accordingly.

Limitations of present study were, done at Deaddiction Centre in a General Municipal

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corporation. Hence, it cannot be generalized to rural populations. Multiple substance abuse is also common in substance use patients, which was not studied.

CONCLUSION

There was more psychopathology among caregivers of non-alcohol use disorders as compared to caregivers of alcohol use disorder. However, there was no significant difference found in the psychopathology among the two groups.

Caregivers of alcohol use disorder had more caregiver burden compared to caregivers of other substance use disorders. However, there was no significant difference (p value >0.01) found when burden was compared with types of substance used (alcohol and other substance). We found significant difference in the caregiver's burden among two genders. Women caregivers had more burden when compared with men caregivers.

Quality of Life was impacted among caregivers in both the groups, more in other substance use disorders than alcohol use disorder. However, there was no significant difference found in quality of life among the two groups.

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