International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor (2018): 7.426

Impact of Alcohol Dependence on Primary Caretaker in a Tertiary Care Hospital in Puducherry

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Abstract: ***Objective: Assessing the severity of primary caretaker burden of alcohol dependence patients and the pattern of primary caretaker burden of patients with alcohol dependence patients. Correlating the severity of dependence and the burden on primary caretaker. Methods: The proportion and descriptive analysis for alcohol dependence syndrome and alcohol dependence symptoms of patients. Mean and standard deviation were computed for all continuous variables for the FBIS domain scores, total objective and total subjective score. The data was analysed using statistical package for social sciences version 23. Results: This study found that there is moderate burden for primary caretakers. In addition the primary caretaker burden and severity of dependence was positively correlated with high level of significance the P value is <0.001. Conclusion: The high family burden suggests that clinicians should not only address the symptoms more effectively but also pay attention to the needs of the family. Therefore while treating alcoholics it is important to alleviate the burden of the primary caretakers which in turn will lead to better treatment effectiveness.***

Keywords: Primary caretaker burden, Alcohol dependence, severity

1. Introduction

Alcohol dependence has been a major social and personal threat in most countries. According to Global Status Report on alcohol, Alcohol Use Disorders (AUDs) account for 1.4 per cent of the global disease burden[1]. A nationwide Indian study on alcohol and drug abuse by Sarkar et al. estimated the prevalence of alcohol use as 21.4%[2].

India, which was considered as one of the countries with tradition of abstinence, is a thing of past. Alcohol consumption now become a social activity and is accepted as a casual behavior. A nationwide survey on drug abuse showed that the prevalence of alcohol consumption was 21% among men and 2% among women in India[3]. Studies in Northern India, shows that 1 year prevalence of alcohol use to be between 25% and 40%. In southern India, the prevalence of alcohol use varies between 33% and 50%, with the high prevalence with the lesser educated and the poor [4].

WHO report [5] states that worldwide per capita consumption of alcoholic beverages in 2010 was equal to 6.2 litres of pure alcohol consumed by every person aged 15 years or older. Approximately, 2.3 million people die each year from the harmful use of alcohol, accounting for approximately 3.8% of all deaths worldwide.

Substance abuse or dependence cause significant harm to self, family and society as a whole [6]. Family play a key role of patients with mental illnesses. This is especially very true in India because of various factor like the tradition of Independence, the concern for the family, and the lack of sufficient mental health professionals [7].

In addition to huge economic losses associated with substance abuse, there are many psychological problems faced by family members and the greatest sufferer is the women in the family as a mother and / or as a wives of the substance abuser and the burden faced by the women is the burden of blame-blame of being responsible for the substance use, blame of hiding the issues from others and blame of not getting timely treatment. Thus the women often become the victim of not just the substance abuser, but also the society. This often led to feelings of guilt, depression (47 %), anxiety (55%), isolation, frequent suicidal thoughts (35%), insomnia (47%) , physical violence (43%) and verbal aggression (55%) [8].

An earlier study from India comparing the family burden of patients with schizophrenia , alcohol dependence and opioid dependence by using family burden interview schedule (FBIS) showed moderately to severe burden in all the three groups [9]. A study from Chandigarh which assessed the family burden using FBIS in 120 subjects of alcohol and / or opioid dependence reported that almost all. (95 – 100 %) caregivers had severe burden [10].

It is mainly the spouse of an alcoholic that faces major stress. Alcohol abuse is associated with marital dissatisfaction, domestic violence and marital discord[11].

Thus, it is clear that not only the abuser but the whole of his family suffers from the ill effects of substance abuse. There are only limited number of studies regarding this issues, therefore this subject has been taken up to evaluate the various socio-demographic variables of alcohol – dependent persons as well as their primary caretakers and to evaluate the severity and pattern of family burden among them and to

correlate the impact with type, duration, treatment and any other relevant variables of substance dependence.

2. Materials and Methods

This is the randomized cross – sectional study, conducted in Sri Venkateshwaraa Medical College Hospital and Research Center. Ariyur, Puducherry. Before commencement of the study, Institutional Ethical Committee (IEC) clearance and Scientific Research Committee (SRC) was obtained. The study was conducted from December 2016 to December 2017, duration of 1year. Data was collected from alcohol dependent patients along with their primary caretaker who attended psychiatry outpatient department who is fulfilling International Classification of Disease and Related Health problems criteria (ICD – 10). The primary caretakers were spouse, mother, relatives, friends or any person who is staying with the patient for the period of 1 year. This cut – off was selected a0s most of the studies done in other parts of India regarding family burden have used this cut – off [12,13].Written informed consent was taken from both patients and primary caretakers.

Inclusion criteria

- Patients with alcohol dependence syndrome fulfilling ICD – 10 criteria.
- Patient and their primary caretaker above 18 years of age who is taking care of the patient.
- Who gave written informed consent for the study.

Exclusion criteria

- Primary caretaker below 18 years.
- Primary caretaker with diagnosed psychiatric illness, mental sub normality.
- Caretaker who are medically too ill to participate in the study.
- Those who are not interested to give informed consent.

Total number of 140 patients came with primary caretaker was diagnosed as alcohol dependence syndrome out of which 27 did not fulfill the inclusive criteria or meet exclusive criteria. In total of 113 primary caretaker , 13 caretaker did not give consent for the study. Thus, 100 primary caretakers were enrolled in this study. The data was collected from primary caretaker as well as from the patients.

Instruments:

- Identifying data and socio demographic data of the patient with alcohol dependence syndrome.
- Socio demographic data sheet for primary caretaker.
- ICD 10 criteria for diagnosis of alcohol dependence syndrome.
- Family burden interview schedule (FBIS) [14].

It is the semi – structured interview schedule that covers 6 areas of burden.

1) Financial burden.
2) Disruption of family routine activities.
3) Disruption of family leisure.
4) Disruption of family interaction.
5) Effect on physical health of others.
6) Effects on mental health of others.

It has 24 items each related on three point scale (mild, moderate and severe). This scale has been developed for the Indian setting, keeping in mind the socioeconomic and cultural conditions in India. The validity and reliability of the scale have been found to be satisfactory. The alpha coefficient of internal reliability of the FBIS was reported to be more than 0.78 by the authors, which indicates that the present schedule is a reliable tool. During the development of scale, the author found their sick relatives experienced most burden on the family finances, the disruption of normal family activities, and production of stress related symptoms in family members due to patient illness [15].

Statistical analysis

The data was collected, tabulated and statistical analysis was done by using statistical package for social sciences - version 23 (SPSS v23). Descriptive data were analyzed by frequency, percentage, mean and standard deviation. The discrete data was assessed in number and percentage.

3. Results

Total of 100 patients were males and most of the patients were in the fourth and fifth decade of life. The socio-demographic of the patients included in the study, all of our study samples were males who were middle aged with the mean age of 40.59 ± 10.97 years. More than two thirds of our samples of 78% were married and Hinduism was the most commonly followed religion which was about 79 % of whole sample. Tamil languages highest of them were 92% and most of them were educated up to middle school 32%. Majority of the patients were occupation their nature of job was manual 51%, Skilled 27, unskilled 14%, unemployed 6% and professional 2% at the time of the study. The participants had a mean income of 11,792.32 ± 6929.87 rupees and majority percentage 43% of them were in the income of 5000-10000. Most of the residence of the patients are middle class and only belonged to rural locality and majority of the informant patients were belong to wife.

Table 1: Descriptive analysis alcohol dependence syndrome patients

S. No.	Alcohol dependence syndrome patients	Patient (n = 100, frequency) %
1	What was the first substance or drug to start	
	Toddy	36%
	Beer	57%
	Brandy	5%
	Country Liquor	2%
2	Age at first	
	<15 Years	22%
	15 – 25 Years	60%
	25 – 35 Years	18%
	35 – 45 Years	0
	>45 Years	0
3	What was the experience	
	Good	96%
	Bad	4%
4	How did it progressed on the current pattern of use	
	No change	3%
	Increased	97%
5	Duration of excess use	

	<1Year	15%
	1 – 2 Years	24%
	2 – 3 Years	32%
	>3 Years	29%
6	Social pattern of drinking (alcohol)	
	Drinking only in social situation	14%
	Drinking alone and when socially Isolated	38%
	Drinking alone and when socially	48%

In table 1, depicts the alcohol dependence patient information regarding the onset and pattern of drinking. As depicted in the above table, 57% of beer was the first substance to start and the age of first use is of about 15 to 25 years which is 60% with 96% of good experience with increased progression on the current pattern of use of about 97% with 34% duration of excess use of about 2 to 3 years. 48% of social pattern of drinking was alone and also with other known persons. In table 2 the results shows 95% of the patients have tolerance, 39% have black out. 58% of patients are totally preoccupied with thoughts of the substances. 69% of them are daily drinker, in that 72% of patients have loss in their own control, with 24% are binge drinkers. 27% of patients have a habit of drinking in unfamiliar surroundings and with unknown people. In that 83% of patients have simple withdrawals symptoms and 27% of patients have complicated withdrawal symptoms. 61% of the patients met with an accident under intoxication and 70% of them are physically injured. 41% of patients involved in the attempt to stop alcohol and failed. 31% of then have attended substance abuse awareness programmes and 29% had undergone prior treatment. 9% of them are psychosis and 25 % of them have hallucination. 15 % of patients have previous history of suicide . 5% have co-morbid psychiatric syndrome and 27% have co-morbid medical illness. In this study 18 % have legal problems and arrest and around 68% of patients have other substance use.

Table 2: Alcohol dependence symptoms further information of patients:

Symptoms further information	Yes	No
Tolerance	95%	5%
Black-out	39%	61%
Preoccupation with thoughts of substances	58%	42%
Daily drinking	69%	31%
Loss of control	72%	28%
Binge drinking	24%	76%
Drinking in unfamiliar surroundings and with unknown people	27%	73%
withdrawal symptoms	83%	17%
Complicated withdrawal symptoms	27%	73%
Accidents under intoxication	61%	39%
Physical injuries	70%	30%
Attempts to stop alcohol and failures	41%	59%
Had attended any substance abuse awareness programmes	31%	69%
Prior treatment	29%	71%
Psychosis	9%	91%
Hallucination	25%	75%
Suicide	15%	85%
Any co-morbid psychiatric syndrome	5%	95%
Any co-morbid medical problems	27%	73%
Any legal problems/arrest	18%	82%
Any other substances use	68%	32%

In table 2, there are more information regarding the alcohol dependence patients and the common side effects of the patients who consume alcohol excessively. The results shows 95% of the patients have tolerance, 39% have black out. 58% of patients are totally preoccupied with thoughts of the substances. 69% of them are daily drinker, in that 72% of patients have loss in their own control, with 24% are binge drinkers. 27% of patients have a habit of drinking in unfamiliar surroundings and with unknown people. In that 83% of patients have simple withdrawals symptoms and 27% of patients have complicated withdrawal symptoms. 61% of the patients met with an accidents under intoxication and 70% of them are physically injured. 41% of patients involved in the attempt to stop alcohol and failed. 31% of then have attended substance abuse awareness programmes and 29% had undergone prior treatment. 9% of them are psychosis and 25 % of them have hallucination. 15 % of patients have previous history of suicide . 5% have co-morbid psychiatric syndrome and 27% have co-morbid medical illness. In this study 18 % have legal problems and arrest and around 68% of patients have other substance use.

Table 3: Frequency statistics of subjective primary caretaker burden score

Subjective Burden	Frequency and Percentage
No Burden	8 (8%)
Moderate Burden	22 (22%)
Severe Burden	70(70%)

In table 3; the subjective burden on the primary caretaker was assessed by a final question to the primary caretaker as to how much burden they experience because of the patient's drinking behaviour. In that aspect, 70% of the primary caretaker reported to have severe burden, 22 % reported moderate burden and only 8% primary caretaker reported having no burden due to the patient's alcoholism. Subjectively most of the primary caretaker reported experiencing moderate to severe burden. In our study sample 77 % of the primary caretaker are spouses since they are the ones directly affected by patients drinking behaviour the subjective burden was severe. Furthermore our study sample has only few mothers as relationship to patients and they were the ones who claimed that they did not experience any burden since they were over protective of their children.

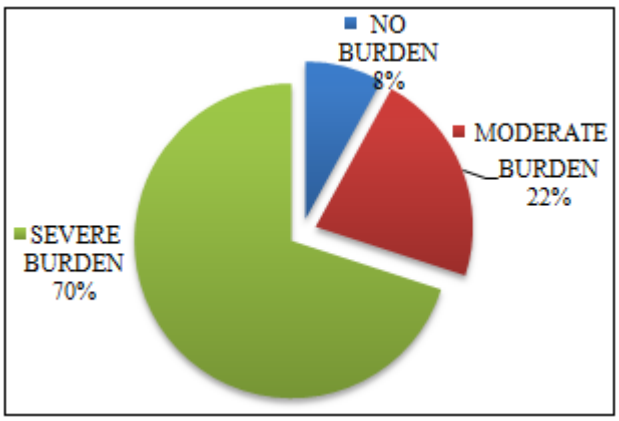

Figure 1: Subjective primary caretaker burden score

Table 4: FBIS domain scores and total objective and subjective scores

Domain	Mean ± SD
1) Financial burden	4.93 ± 3.24
2) Disruption of routine family activities	4.01 ± 3.15
3) Disruption of the family leisure	1.30 ± 2.23
4) Disruption of the family interaction	4.29 ± 2.62
5) Effect on the physical health of others	0.53 ± 0.66
6) Effect on the mental health of others	1.38 ± 1.05
Objective Burden Total score	16.31 ± 9.23
Subjective Burden Subjective burden on the family	1.39 ± 0.56

FBIS: Family Burden Interview Schedule

In table 4, the mean and SD was calculated for all the subscale domains. The average mean was high for the subscales financial burden, disruption of routine family activities and disruption of family interaction. It was found to be very low for the domain that assesses the effect on the physical health of primary caretaker. The total objective burden was calculated by summing all the individual items in each domain subscales excluding the subjective burden question. The average of the total objective burden in the FBIS was 16.31 ± 9.23 and the average of the total subjective burden as measured by FBIS was 1.39 ± 0.56. Among the primary caretakers ninety per cent were 3/4 th of them female spouses. The total objective burden scores of the primary caretakers was found to be 16.31± 9.23, the subjectively 70% of the primary caretakers experienced severe burden, 22 % had moderate burden and Thus the results showed that the primary caretakers had experienced moderate to severe burden. About 3/4th of the primary caretakers reported having arguments related to alcohol use. In the effect on the physical health of others domain almost all (8%) of the primary caretakers reported that there was no burden; whereas in the effect on the mental health of others domain 70% of the primary caretakers reported to have moderate to severe burden in mental well-being due to loss of sleep, irritability, depressed mood and death wishes secondary to the patient's alcohol usage. Our additional objective of correlating primary caretaker burden with severity of dependence found to be highly significant the p value is < 0.001

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Table 5: Mean and SD of total objective burden as measured by FBIS

Objective Burden	Mean ± SD
Total score	16.31 ± 9.23

In table 5, the total objective burden was calculated by summing all the individual items in each domain subscales excluding the subjective burden question. The average of the total objective burden in the FBIS was 16.31 ± 9.23.

Table 6: Mean and SD of total subjective burden as measured by FBIS

Subjective Burden	Mean ± SD
Subjective burden on the family	1.39 ± 0.56

In table 6, the average of the total subjective burden as measured by FBIS was 1.39 ± 0.56.

4. Discussion

The present study was conducted to find out burden on PCT of the patients of alcohol dependence and to correlate burden with alcohol type, duration of dependence, previous treatment and other relevant factors. We also examined whether sociodemographic attributes of the patients affected the presence and severity of burden on PCT.

It was observed in present study that all the patients were males with the majority of them were in middle age group, married and from lower to middle socioeconomic status. The result were comparable to other North Indian studies which also shows the majority of abusers were married males in reproductive age group, having below high school level education [16]. Much of the studies sociodemographic profiles of the caretaker were matched with one similar study done in Ranchi, India in the past. In a country us, there is a cultural belief that men should be the breadwinner of the family and probably this would have shifted the responsibilities of caring for the sick of the women[17]. Our study was studied with the aim of assessing the various aspects of burden on the primary caretaker or family members of alcohol dependent patients and the relationship between the severity of dependence and the primary caretaker burden.

5. Methodological Issues

Study design

The study focused on patients with alcohol dependence syndrome, who were seeking de-addiction treatment in our centre and who are representing larger group of such patients in the community.

Severity of Alcohol Dependence

Although India is regarded as a traditional "dry" country; it is the dominant producer of alcohol in the South-East Asia region (65 percent) and contributes to about 7 percent of the total alcohol beverage imported into the region. More than two thirds of the total beverage alcohol consumption within the region is in India. India is experiencing a massive increase in alcohol consumption [(18)]. Our study showed that, about 52% our patients reported mild dependence, 31% of patients reported to have moderate dependence, 15% reported severe dependence and only 4 patients had very severe dependence. Most of the patients were attending the out-patient department for the first time, in the name of compulsion by their family members since most of the patients were reluctant for treatment. Most of them were under reporting their alcohol consumption and this is probably why almost half of the patients were reported to have mild dependence. Only 4 patients reported having very severe dependence.

Burden on the family and the primary caretaker:

Primary caretaker burden, particularly that of closely involved family members such as parents are the important outcome measure in mental health care, so as to assess and reduce it for the well- being of both primary caretaker and mentally ill. Indeed, the measurement of primary caretaker burden has been shown to enhance worker and administrator awareness of the need to reduce such burden [(19)].

In our study the burden was assessed using the Family Burden Interview Schedule (FBIS) which is a semi-structured interview that has 24 items which are further classified into six categories viz., financial burden, disruption of routine family activities, family leisure, family interactions, and effect on physical and mental health of others. Ratings are carried out on a three−point scale and the schedule has a separate category to rate "subjective" burden.

In our study the primary caretaker experienced moderate to severe burden. The present study shows that the primary caretaker of individuals with alcohol dependence have high burden on financial aspects, disruption of routine family activities, disruption of family interaction, and effect on mental health of others. Our finding of the most commonly reported burden being financial is understandable as well. Globally, psychiatric illness in general and substance abuse in particular are costly disorders to have. For substance abuse in particular a lot of money is spent on procuring and using the substance and living through the consequences like accidents and crime, and seeking treatment in terms of travelling to treatment canters, paying for healers - including faith healers, and buying medications and services [(20)]. The current study result also matches with a previous study [(21)] which found that primary caretaker exhibited high scores of burden in terms of financial, household, interpersonal relations and parental roles at admission. It is likely that the degree of dysfunction of patient is one of the significant predictor of primary caretaker's burden and hence there are more burdens in financial views. In our study the moderate to severe burden on the primary caretaker is probably due to the dependent nature of the spouses for financial reason, for child rearing and most importantly societal views of being separated would cause more mental trauma than being with them and experiencing the burden of caring, since more than 3/4th of our primary caretaker were spouses and having children of varying age.

Correlation between severity of dependence and primary caretaker burden:

Our study demonstrated that there is a strong correlation between the severity of dependence and the level of burden on the primary caretaker. Similar results have been obtained in a previous study done at Chandigarh [(22)] which reported higher burden being associated with severe dependence.

Patient's dependence severity was positively correlated with their primary caretaker burden at the correlation coefficient value of 0.669 which means the correlation was highly significant. The various domains such as financial burden, disruption of routine family activities, disruption of family interaction, effect on the physical health of others, effect on the mental health of others was also positively correlated with highly significant correlation coefficient value. This is due to the fact that in most of the families patients were the sole earning member of the family and majority of the primary caretaker were unemployed. Also money was deviated for procuring the substance and treatment expenditures [(23).] Frequent arguments, verbal abuse and physical abuse of family members under the influence of alcohol cause significant disruption in the communication between family members, disruption in their leisure activity as well as significant adverse impact on primary caretaker physical and mental health.

Results of our study indicate that burden of care and mental health problems are high in primary caretaker of patients with alcohol dependence which is consistent with the findings of other studies [(24)]. The present study also matches with a previous study that primary caretaker showed high burden of care and the majority had problems with their mental health. There was a highly significant relationship among Burden assessment scale and all their subscales i.e., objective burden, subjective burden, somatic symptoms, anxiety and insomnia, social dysfunction and severe depression [(25)].

The finding of our study shows that mental health of primary caretaker remains on stake when they have high level of burden of care. Similar findings have been reported in the previous studies showing that chronic mental illnesses generally affect the overall functioning of primary caretaker and bring negative consequences on their mental health [(26)]. As reported in the previous studies, chronic mental illnesses generally affect the overall functioning of primary caretaker and bring specific severe consequences on mental health.

6. Summary and Conclusion

The present study was aimed at assessing the severity of primary caretaker burden of alcohol dependence patients, and to assess the pattern of burden on the family member or primary caretaker of a person with alcohol dependence syndrome. Furthermore the assessed burden was correlated with the severity of burden. For the purpose of this study, a structured assessment was carried out in a sample of 100 alcohol dependent patients.

6.1 Summary

The salient observations of the current study were.

1) In our study all the 100 patients were males and most of the patients were in the fourth and fifth decade of life.
2) Among the primary caretakers ninety per cent were females. Among the female primary caretakers 3/4th of them were spouses.
3) The total objective burden scores of the primary caretakers was found to be 16.31+9.23 and the subjectively 70% of the primary caretakers experienced severe burden and 22 % had moderate burden. Thus the results showed that the primary caretakers had experienced moderate to severe burden.
4) About 3/4th of the primary caretakers reported having arguments related to alcohol use.
5) In the effect on the physical health of others domain almost all (8%) of the primary caretakers reported that there was no burden; whereas in the effect on the mental health of others domain 70% of the primary caretakers reported to have moderate to severe burden in mental well-being due to loss of sleep, irritability, depressed mood and death wishes secondary to the patient's alcohol usage.
6) Our additional objective of correlating primary caretaker burden with severity of dependence found to be highly significant.

6.2 Conclusion

The study found that there is moderate burden for primary caretakers. In addition the primary caretaker burden and severity of dependence was positively correlated with high level of significance. The high family burden suggests that clinicians should not only address the symptoms more effectively but also pay attention to the needs of the family. In a country like India, where formal mental health resources are limited and family plays an important role in management of patients, the well-being of primary caretakers assumes greater importance in the care of the patient. Therefore while treating alcoholics it is important to alleviate the burden of the primary caretakers which in turn will lead to better treatment effectiveness.

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