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BURDEN OF SUBSTANCE DEPENDENCE ON INDIAN FAMILIES

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Article Info	ABSTRACT
	The study was planned to assess the burden on family members of patients with substance dependence in India. This is a randomized, cross sectional study involving 60 family members of patients with ICD-10 diagnosis of single substance dependence attending Deaddiction outclinic of Department of Psychiatry, Government Medical College, Patiala, Punjab, India. Details of substance use and socio-demographic attributes of dependent patients were taken on semi-structured proforma. All family members underwent detailed assessment using Family Burden Interview Schedule to assess burden.Higher proportion of burden was seen in family members of alcohol and opium dependent patients especially in financial areas, disruption of routine activities, family leisure and family interaction. Burden on families was observed more in temporal association to duration of substance dependence. Assessment of burden on family members must be observed at every stage of treatment of patient with substance dependence for better rehabilitation of patients.

INTRODUCTION

Substance abuse inflicts heavy cost on family and nation. A drug addict spends heavy amount of money for his addiction. Furthermore, it can interfere with an individual's employment, productivity and losses due to premature death of abuser either due to natural course of disease, trauma or suicide. Substance abuse is associated with increased risk of other diseases like HIV, tuberculosis and sexually transmitted diseases. These co-morbidities lead to additional burden on family. In addition to huge economical losses associated with substance abuse, there are many psychological problems faced by family members and the greatest sufferer is the woman in the family. This often led to feelings of guilt, depression (47 percent), anxiety (55 percent), isolation, frequent suicidal

thoughts (35 percent), insomnia (47 percent), physical violence (43 percent) and verbal aggression (50 percent) [1]. A study on psychopathology in children of fathers with substance use disorders found that preadolescent children were known to have more behaviour problems, depression, and anxiety [2].

Thus, it is clear that not only the abuser but whole of his family suffers from the ill effects of substance abuse. So, it is important to measure the combined effects of all these factors to clearly understand the problems related to substance dependance on family members, the study was planned to assess the burden on family members of patients with substance dependence. So, it is important to assess all demographic characteristics of the patients as it is the patient with substance dependence who are the burden on family members.

MATERIAL AND METHODS
Sample

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After obtaining due permission from departmental ethics committee of the Department of Psychiatry, this cross sectional study was done in outpatient clinic of de-addiction centre of Department of Psychiatry, Government medical college, Patiala, India. 60 patients with ICD-10 diagnosis of single substance dependence were randomly selected and their family members were recruited. Simple random selection criterion was used in the study.

The term 'Substance' in substance dependence in this study refers to dependence to alcohol as well as other drugs of abuse. After explaining the purpose and nature of the study, written informed consent was taken from family members to join the study, ensuring confidentially of the information.

After applying exclusion criteria like persons with other long term medical illness not associated with substance dependence, persons with mental retardation, person with pre-existing psychiatric disorders and refusal to give informed consent, 4 were excluded, thus 56 family members were enrolled for the study. One family member of one patient was included and the data was collected from family members as well as from the patients.

Instruments

Household schedule [3]- This schedule records the identifying data and socioeconomic status of respondents by using the modified Udai-Pareek Scale.

Substance abuse schedule- This is the semi-structured questionnaire which has been framed to elicit the substance used, quantity, frequency, duration, age at onset of use, attitude and reasons for taking substance, source of obtaining substance and withdrawal effects, if any, on discontinuation of substance. ICD-10 criteria for diagnosis of substance dependence [4].

Family Burden Interview Schedule [5]- It is a semi-structured interview schedule having 24 item scale and each item score ranges from 0-2 where 0 means no burden, 1 means moderate burden and 2 means severe burden.. Thus, the total score range of scale is 0-48. 0 score means no burden, 1-24 means moderate burden and 25-48 means severe burden. It is further divided into 6 categories-

- Financial burden
- Disruption of routine family activities
- Disruption of family leisure
- Disruption of family interaction
- Physical health
- Mental health

The data were subjected to statistical evaluation using SPSS 17 software. Descriptive statistics were used to characterize demographic and clinical data of the whole sample. The data was assessed by mean, range and standard deviation. The discrete data was assessed in number and percentage.

RESULTS

All the patients in the study were males. Majority of the patients were from age groups 25-44 yrs and mean age of the patients was 38.87 ± 7.44. About 51.8 percent of the patients were illiterate and 46.5% had primary to high education. Majority (92.8 percent) of the patients were married. There were two unmarried patients and two patients were widowed. 78.6% percent of them were Sikhs. 17.8 percent of them were Hindus and 3.6 percent were Muslims. Most of them were from middle (34 percent) to lower middle (26.8 percent) class. Among the patients with single substance dependence maximum had alcohol dependence (57 percent). About 34 percent had tobacco dependence and 9 percent had opium dependence. About 43 percent were having substance dependence from 6-15 years. 26.8 percent were having dependence from >15 years and 19.6 percent were from 1-5 years. Only in 6 patients (10.7 percent), dependence was from <1 year. There were 4 patients (7.1 percent) who had already taken treatment for substance dependence whereas 52 patients (92.9 percent) had never taken treatment for substance dependence (Table 1).

Moderate burden was seen in family members of patients in 25-44 years age group whereas severe burden was noticed in family members of patients of 25-34 years. Higher proportion of burden was observed in families of illiterate patients, widowed or unmarried patients. Family members of 50 percent of widowed patients had severe burden and 50 percent had moderate burden whereas family members of all unmarried patients had moderate burden. Severe burden was seen in lower middle class (13.3 percent) while moderate burden was seen in all socioeconomic status. In family members of alcohol dependent patients, majority felt moderate burden while in family members of patients with tobacco dependence, 52.6 percent families had moderate burden and 47.4 percent had no burden. Severe burden (25 percent) in families was noticed in the patients who had already taken treatment for substance dependence and relapsed and moderate burden was observed in families of dependent patients irrespective of treatment (Table 1).

Statistical Analysis

Table 1. Severity of burden according to sociodemographic attributes of patients

Socio demographic attributes		No Burden		Moderate Burden		Severe Burden	
		N	%	N	%	N	%
Age	15-24 (n=6)	0	0	5	83.3	1	16.7
	25-34 (n=15)	3	20.0	10	66.7	2	13.3
	35-44 (n=14)	1	7.1	13	92.9	0	0

Research Article

	45-54 (n=9)	4	44.4	5	55.6	0	0
	55-64 (n=7)	1	14.3	6	85.7	0	0
	>65 (n=5)	1	20.0	4	80.0	0	0
Education	Illiterate (n=29)	6	20.7	22	75.9	1	3.4
	Primary (n=8)	1	12.5	6	75.0	1	12.5
	Middle (n=9)	1	11.1	8	88.9	0	0
	High (n=9)	2	22.2	6	66.7	1	11.1
	Above matric (n=1)	0	0	1	100.0	0	0
Marital Status	Married (n=52)	10	12.5	40	77.5	2	10
	Unmarried (n=2)	0	0	2	100	0	0
	Widowed (n=2)	0	0	1	50	1	50
Socio economic Status	Upper Class (n=2)	1	50	1	50	0	0
	Upper Middle (n=8)	1	12.5	7	87.5	0	0
	Middle class (n=19)	4	21.0	15	79.0	0	0
	Lower middle (n=15)	2	13.3	11	73.4	2	13.3
	Lower Class (n=12)	2	16.7	9	66.7	1	8.3
Type Of Substance	Alcohol (n=32)	0	0	30	93.8	2	6.2
	Tobacco (n=19)	9	47.4	10	52.6	0	0
	Opium (n=5)	1	20	3	60	1	20
Duration of Dependence	<1 y (n=6)	2	33.3	4	66.7	0	0
	1-5 y (n=13)	3	23.1	10	76.9	0	0
	6-15 y (n=26)	4	15.4	20	76.9	2	7.7
	>15 y (n=11)	1	9.1	9	81.8	1	9.1
Treated	Treated (n=4)	0	0	3	75.0	1	25.0
	Never treated (n=52)	10	19.2	40	76.9	2	3.9

Table 2. Types of burden according to sociodemographic attributes of patient

Socio demographic attributes		Financial burden (0-12)		Disruption of routine activities (0-10)		Disruption of family leisure (0-8)		Disruption of family interaction (0-10)		Physical health (0-4)		Mental health (0-4)		Total (0-48)	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Age	15-24 (n=6)	2.3	1.2	2.7	1.4	2.2	1.0	2.7	1.1	0.8	0.3	1.5	0.5	12.2	7.4
	25-34 (n=15)	3.5	1.9	2.8	1.3	2.3	0.9	2.2	1.4	0.2	0.1	0.9	0.6	11.9	6.9
	35-44 (n=14)	2.3	1.1	2.3	1.0	2.2	1.0	2.1	0.8	0.2	0.1	1.0	0.4	10.1	5.7
	45-54 (n=9)	3.4	1.6	2.6	1.1	2.1	0.9	2.3	1.2	0.3	0.2	0.9	0.2	11.6	5.8
	55-64 (n=7)	2.8	0.9	2.2	0.8	2.2	1.0	2.2	1.2	0.2	0.1	0.7	0.3	10.3	4.9
	>65 (n=5)	3.3	1.6	2.1	1.1	2.4	1.1	2.0	0.7	0.6	0.2	0.9	0.3	11.7	4.8
Education	Illiterate(n=29)	3.1	1.3	2.8	1.1	2.5	1.2	2.7	1.1	0.5	0.2	1.2	0.4	12.8	7.3
	Primary (n=8)	2.7	0.9	2.6	0.8	2.3	0.8	2.5	1.0	0.5	0.2	1.1	0.3	11.9	6.1
	Middle (n=9)	3.0	1.2	2.4	1.0	2.0	0.8	2.5	1.1	0.3	0.1	0.9	0.3	10.8	5.4
	High (n=9)	3.2	1.6	2.8	1.4	2.1	1.3	2.4	1.2	0.2	0.1	0.8	0.3	11.6	6.3
	Above matric (n=1)	2.0	0	1.0	0	0	0	1.0	0	0	0	0	0	4.0	0
Marital Status	Married (n=52)	2.8	1.4	2.2	1.2	2.3	1.1	2.6	1.4	0.2	0.1	1.0	0.3	11.0	6.4
	Unmarried (n=2)	3.0	1.0	2.5	0.5	2.0	1.0	2.0	1.0	0	0	2.0	1.0	11.5	6.5
	Widowed(n=2)	4.5	2.5	4.0	2.0	3.5	1.5	4.5	2.5	0	0	2.0	1.0	18.5	9.6
Socio economic Status	Upper Class	2.5	2.5	2.0	2.0	1.5	1.5	2.5	2.5	0	0	1.0	1.0	9.5	9.5
	Upper Middle	2.7	1.4	2.3	0.9	2.1	0.8	2.3	0.8	0.2	0.1	0.8	0.3	10.4	4.3
	Middle class	3.4	1.9	2.7	1.2	2.3	1.5	2.6	1.2	0	0	1.2	0.5	12.2	4.9
	Lower middle	4.0	1.1	3.0	1.8	3.0	1.2	5.5	2.4	0.5	0.2	1.5	0.6	17.5	5.4
	Lower Class	5.5	2.5	3.5	2.0	3.9	1.6	2.5	1.5	0.4	0.1	1.5	0.7	17.7	8.3

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Type of substance dependence	Alcohol (n=32)	3.5	1.3	2.8	1.1	2.7	1.2	3.0	1.6	0.4	0.2	2.0	0.8	14.4	5.1
	Tobacco (n=19)	1.2	0.3	0.8	0.2	0.7	0.2	1.2	0	0.3	0.1	0.5	0.2	4.7	2.1
	Opium (n=5)	3.0	1.1	4.0	1.8	3.0	1.2	5.5	2.4	0.5	0.2	1.5	0.6	17.5	5.4
Duration of Dependence	<1 y (n=6)	2.1	1.3	1.7	0.8	0.9	0.4	1.4	0.5	0	0	0.6	0.2	6.7	3.4
	1-5 y (n=13)	2.2	1.3	1.9	0.9	1.8	0.9	1.6	0.4	0.2	0.1	0.6	0.3	8.3	4.2
	6-15 y(n=26)	2.4	1.1	2.1	1.1	1.7	1.1	2.1	1.3	0.3	0.1	0.8	0.3	9.4	4.7
	>15 y (n=11)	2.9	1.6	2.3	0.9	1.8	0.8	2.4	1.2	0.5	0.2	1.3	0.4	11.2	5.2
Treated	Treated (n=4)	2.7	0.9	3.7	0.8	3.0	0.9	3.2	1.1	0	0	1.2	0.4	13.8	5.2
	Never treated (n=52)	2.9	0.7	2.4	0.6	2.2	0.6	2.4	0.4	0.1	0.1	0.6	0.2	10.6	4.3

Table 2 shows mean scores and standard deviation on various subscales of family burden interview schedule and it was noticed that maximum burden score was seen in financial burden subscales followed by disruption of routine activities, family leisure and family interaction while lesser burden was observed in physical and mental health irrespective of socio demographic profile of dependent patients. According to age of patients, maximum financial burden was noted in families of 25-34, 45-54 and >65 years of patients. Higher total mean scores were seen in the patients of 15-24 years.

Education and marital support of person was found to be a relieving factor in burden on families as it influences the financial status of person. Mean scores were higher in the illiterate patients in all the categories compared to patients with higher levels of education. Mean score in illiterate patients was 12.8 compared to 11.6 in patients with high standard education. The mean burden score was higher (18.5) in family members of widowed patients compared to married patients (11.0) and unmarried patients (11.5). Financial burden was seen more in widowed and unmarried patients (Table 2).

As noted, mean score was found to be high in patients belonging to lower middle and lower socioeconomic class. Score in the families from lower socioeconomic status was 17.7. Financial burden as well as disruption of routine activities, family interaction and family leisure was seen more in lower to middle class families (Table 2).

Higher burden on all subscales was found in alcohol and opium dependent patients as compared to tobacco patients. Mean burden scores were lowest in the family members of the patients with tobacco dependence (4.7) whereas higher scores were found in the family members of alcohol and opium dependence patients. Burden scores on all subscales increases as duration of dependence increases. In the patients with dependence from >15 yrs, mean score was 11.2 whereas in patients with dependence from <1 year mean score was 6.7. Higher burden was found in families of patients who had taken treatment in past for substance dependence and relapsed. Mean score in the patients was 13.8 in treated and 10.6 in never treated patients (Table 2).

DISCUSSION

The present study was conducted to find out burden on Indian families of patients with single substance dependence and to correlate burden with substance type, duration of dependence, previous treatment and other relevant factors.

It was observed in present study that all dependent patients were males with majority of them were in age group 25-44 years, illiterate, married and from lower to middle socioeconomic status. The results were comparable to other studies. [6-8] As observed, maximum patients had alcohol dependence followed by tobacco and opium dependence similar to studies in past [7-10]. As noted majority of the patients were having substance dependence from 6-15 years and had never taken treatment for substance dependence.

Socioeconomic status of person also influences the burden in many ways as it affects the quality of life and living style of person. As observed, moderate burden was seen in families of patients of all age group and in all socioeconomic classes whereas severe burden was noticed in families of patients of productive age group and in lower socioeconomic class. Social support was found to be a relieving factor in burden as higher proportion of burden was observed in families of illiterate patients, widowed or unmarried patients. It was observed that severity of burden increases in proportional to duration of dependence. Higher proportion of burden in all areas was seen in families of alcohol and opium dependent patients especially in financial areas, disruption of routine activities, family leisure and family interaction.

Inter-parental conflict and parenting behaviour mediated the relationship between family type and children's adjustment. Interventions to improve fathers' parenting behaviour and reduce partner conflict may lead to better adjustment among custodial children of drug-abusing fathers. One study showed that children with drug-abusing fathers experienced more internalizing and externalizing symptoms than children with alcoholic or non-substance-abusing fathers [11].

Research Article

A five year follow up study of 100 heroin addicts showed that 20% reported a history of conflict amongst parents, 30% reported conflict with cousins and 30% reported verbal aggression, while 19% reported physical aggression among family members. 32% clients reported drug addiction in family. Most of the clients described some kind of a personal or family problem. These included, death of a parent in early childhood (08%), childhood labour (51%), family conflicts (parental, spouse, in laws), (38%), other Social problems (27%) and work place stress (32%) [12].

People with a family history of alcoholism have a higher prevalence of lifetime alcohol dependence than people without such a history [13]. Traits such as neuroticism, higher anxiety levels, depression, low self-esteem and communication apprehension in wives of alcoholics and attributed it to the intense stress and trauma experienced by them in the vitiated domestic environment that they live in [14]. Adult children of alcoholics (COAs) are at increased risk for emotional problems including depressive symptoms, anxiety disorders and frequent occurrence of post traumatic stress disorder [15]. Children of illicit drug abusers are more likely than other children to demonstrate immature, impulsive or irresponsible behaviour, to have lower IQ scores, poorer school attendance, and to have behavioural problems, including depression and anxiety [16].

Gender-related differences seem to exist and may contribute to different phenotypes during development from early childhood to adolescence. A longitudinal study showed that beginning at age 2, significantly higher numbers of externalizing symptoms were observed among COAs. In female COAs, a pattern similar to that of the male COAs emerged, with the predominance of delinquent and aggressive behavior. COAs fathers are at high risk for psychopathology [17]. Another study observed that COAs mothers were at a greater risk of becoming alcohol abuser [18].

Higher rates of alcohol and opioid dependence were evident in first-degree relatives of opioid-dependent patients. A study showed that first-degree relatives of opioid-dependent males were more likely to have a psychiatric disorder than those of normal controls. Other disorders (major depression. chronic psychosis and obsessive compulsive disorder) did not have significant aggregation in the first-degree relatives of opioid-dependent subjects [19].

Another study analysed the morbidity risks for alcoholism and drug abuse in the first-degree relatives of male cocaine addicts with or without alcoholism. Significant increases in morbidity risks for alcoholism were found among male relatives of cocaine addicts with comorbid alcohol dependence when compared with relatives of cocaine addicts with no alcohol comorbidity [20].

Assessing burden on family members of substance dependence patient has many implications as it might affect the treatment compliance and causes overall poor quality of life of both patient and family members. Proper training of clinicians is mandatory to recognize the psychological problems of family members arising from burden and treat them accordingly. Another issue which is of importance is prevention efforts and studies of the transmission of liability for psychiatric disorders in children should carefully consider parental childhood characteristics.

LIMITATIONS

The study was cross sectional. The sample size, though reasonable, was lesser than some of the previous similar studies. Single sited study limited to specific region limits the generalizability of the results to the rest of Indian population. Besides, multicentral studies or metaanalysis studies in different geographical locations can increase accuracy of the results.

CONCLUSION

Thus from above discussion, it is clear that not only the addict but whole of his family suffers from the ill effects of drug abuse. Apart from direct effects of increased morbidity and mortality among addicts, the ill effects of alcohol and substance dependence also include financial burden over family, psychiatric illness that may range from behavioral problems to severe illness like depression, anxiety, insomnia etc among the family members especially wife and children of the addict, disrupted family and social life, loss of job and increased abuse potential of alcohol and other substances in the children.

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CONFLICT OF INTEREST:

The authors declare that they have no conflict of interest.

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