

Original Research Article

Psychiatric morbidity and marital satisfaction: an empirical study on spouse of alcohol dependent cases in Barak valley, North-East India

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ABSTRACT

Background: Alcohol dependence poses serious threats to the healthy functioning of the family apparatus in a multitude of ways. The deleterious impact of alcohol dependence on the couple remains an area of genuine concern for mental health professionals across the world.

Methods: 69 cases were selected consecutively from the Psychiatry Outpatient department fulfilling the ICD-10 criteria of alcohol dependence syndrome and the spouse of these cases were assessed to evaluate the pattern and severity of psychiatric morbidity and marital satisfaction. Statistical associations were found between the important variables.

Results: Out of the 69 cases, we found that mean age of the alcohol dependent cases was 40.75 ± 8.21 while that of their spouse was 33.91 ± 7.86 years. Most of the alcoholics had 1-9 years of alcohol dependence (86.95%) and severe alcohol dependence (47.82%) based on SADD score. Majority of the spouse of the alcoholics suffered from psychiatric illness (60.86%) with the most common diagnosis being depressive disorder (30.43%) based on ICD-10 criteria. Most of the spouse had lower level of marital satisfaction and presence of marital dissatisfaction was significantly associated with a more severe dependence among their alcoholic husbands. Increased duration of alcohol consumption was associated with higher severity of alcohol dependence. Also, the presence of psychiatric morbidity in the spouse was associated with increased years and higher severity of alcohol dependence.

Conclusions: If the spouses are psychologically healthy, a good support system is ensured for them which is necessary to maintain motivation levels to leave alcohol.

Keywords: Alcohol dependence, Marital satisfaction, Psychiatric morbidity, Spouse

INTRODUCTION

The deleterious impact of alcohol dependence on the couple remains an area of genuine concern for mental health professionals across the world. Notwithstanding the overarching physical and psychiatric implications of the disease entity, the ramifications on the scarred and stigmatized relationships often goes unrecognized in routine clinical practice. The modern age has been marked by two increasingly alarming phenomena that, on the surface, appear independent of each other—a significant change in the patterns of alcohol consumption

across demographics and a radical transition in the structure and scope of the traditional relationship between the couple. It is indeed worthwhile to investigate the possibility of a hidden correlation between these two realities as we grapple with the burden of alcohol dependence in its current manifestation. According to the World Health Organization (WHO) report 2010 alcohol per capita (15+) consumption (in litres of pure alcohol) in India has increased from an average of 3.6 for the year 2003-2005 to 4.3 for year 2008-2010. The prevalence of alcohol use disorder was 8.7% among men and 1.9% among women while that of alcohol dependence was

5.5% among men and 1.35% among women.¹ Alcohol Dependence poses serious threats to the healthy functioning of the family apparatus in a multitude of ways. Over time there is economic misery, societal alienation, individual exasperation and eventual listlessness that befalls the ill-fated families. The spouse is most commonly at the receiving end of the barrel battling simultaneously with the disease as well as the diseased. The harrowing rise in domestic violence and sexual offences under the influence of alcohol remain a vexing finger in the eye. The children of parents with alcohol dependence bear the brunt of the scathing marital discord in a hostile and threatening environment in their formative years, often growing up with deficits that stifle their adult lives.

It is against this bothersome backdrop that the current study was attempted with the below mentioned aims and objectives whereby we have tried to explore the association between alcohol dependence and marital satisfaction among the couples and presence of the psychiatric morbidities in the spouse of the alcoholics. It is hoped that the current study will inspire further interest in the study of distinctive configurations of Alcohol Dependence across the ethnically and culturally diverse regions of North Eastern India.^{2,3}

Aims and objectives

- To find the important socio-demographic variables of the alcohol dependent cases and their spouse.
- To examine the severity and duration of alcohol dependence among the patient.
- To assess the pattern of psychiatric morbidity in wives of patients with alcohol dependence syndrome.
- To assess the degree of marital satisfaction among wives of patients with alcohol dependence.
- To explore the association between socio-demographic factors, psychiatric morbidity in spouse, marital satisfaction and severity of alcohol dependence.

METHODS

This study was carried out in Silchar Medical College and Hospital, Assam, India which is a tertiary care hospital after taking proper approval of the institutional ethics committee. This hospital provides medical facilities to the whole Barak Valley of southern Assam, which includes the districts of Cachar, Karimganj and Hailakandi along with the neighbouring states like Manipur, Mizoram and Tripura, India.

Sixty-nine alcohol dependence cases along with their wives, selected consecutively were included in this single interview cross-sectional hospital based study. Alcohol dependence cases were diagnosed according to the International Classification of Disease and Related Health

problems (ICD-10) criteria (clinical descriptions for diagnostic guidelines).¹⁴

All the cases as well as their spouse who were above 18 years of age and gave written consent to participate in the study were included. We excluded cases below 18 years of age, abusing any other type of substance, suffering from severe debilitating or other comorbid chronic diseases, who did not give consent to participate in the study and cases who did not provide adequate and reliable information for the study. If the spouse of the alcohol dependence cases were having any past diagnosis of psychiatric disorder they were excluded from the study. At first informed consent from all patients/guardians was taken after explaining them the purpose and procedure of the study. Then all the cases who were selected consecutively for study were interviewed in detail using the below mentioned tool without any set limit. Interview pattern was flexible to elicit maximum data. For all cases privacy of interview and confidentiality was strictly maintained.

Tools

- A standard proforma describing socio-demographic variables was used which was designed and standardized and tested in the Department of Psychiatry, SMCH.
- The socio-demographic proforma gave information about age, gender, religion, marital status, family type and domicile, education, occupation and socioeconomic status of alcoholic cases and their wives.
- Severity of alcohol dependence in the husbands was assessed using short alcohol dependence data (SADD).⁷ This scale measures the state of alcohol dependence at a point of time and the changes which occur with time. It is a 15 items scale, each item with four possible responses, scored as 0, 1, 2 and 3. The maximum score on the scale is 45 and dependence is categorized based on scores, into low (0-9), moderate (10-19) and high (>19) dependence.
- Psychiatric illness among spouses of alcohol dependent patients was diagnosed according to the International Classification of Disease and Related Health problems (ICD-10) criteria (clinical descriptions for diagnostic guidelines).²
- Marital satisfaction among the spouses was assessed using the marital satisfaction scale (MSS). This scale has been developed and standardized for use among Indian population and has good validity and reliability. It has 30 items with three response categories, which are scored as 0, 1 and 2. The maximum possible score on the scale is 60 and higher scores imply greater marital satisfaction.

Analysis of data

Appropriate data was collected, tabulated and Statistical analysis was done by GraphPad prism for windows

version 6.01 and Statistical Package for the Social Sciences (SPSS v22) (SPSS Inc., Chicago, USA).¹⁶ Descriptive statistics were used to summarize the data. ANOVA and Fischer exact test was applied to find out p-value and statistical significance wherever necessary. Significance was determined at p<0.05.

RESULTS

Sociodemographic variables of the alcohol dependent cases

In this hospital based cross-sectional case study done on a total of 69 alcohol dependent cases and their wives Table 1 shows the sociodemographic variables of the cases.

Table 1: Sociodemographic variables of the alcohol dependent cases.

Variable	Total cases (n=69)	Percentage
Age range		
20-29	7	10.14%
30-39	22	31.88%
40-49	28	40.57%
50-59	10	14.49%
60-70	2	2.89%
Religion		
Hindu	61	88.40%
Muslim	8	11.59%
Domicile		
Rural	48	69.56%
Urban	21	30.43%
Family type		
Joint	48	69.56%
Nuclear	21	30.43%
Education		
Illiterate	11	15.94%
Primary	35	50.72%
Secondary	17	24.63%
Graduate	6	8.69%
Occupation		
Unemployed	7	10.14%
Unskilled worker	26	37.68%
Skilled worker	7	10.14%
Service	21	30.43%
Business	8	11.59%
Socio-economic status		
Lower	19	27.53%
Lower middle	31	44.92%
Middle	8	11.59%
Upper middle	6	8.69%
Upper	5	7.24%

The age of the cases was found to be in the range of 26-62 years with the mean age of 40.75±8.21. Majority of the cases were from the age range of 40-49 years (40.57%) followed by 30-39 years (31.88%). Most of the

cases were from Hindu religion (88.40%) and from rural areas (69.56%). Looking at family type majority of the cases were from joint family (69.56%) as compared to nuclear family (30.43%). Education wise majority of the cases were primary educated (50.72%) followed by secondary education (24.63%) while occupation wise most of the cases were unskilled workers (37.68%). Majority of the cases were from lower middle socioeconomic status (44.92%) followed by lower class (27.53%).

Sociodemographic variables of spouse of the cases

Table 2 shows the sociodemographic variables of the spouse of the alcohol dependent cases. The age range of the wives was found to be in the range of 20-68 years. The mean of the age of the wives was found to be 33.91±7.86. Majority of the cases were in the age range of 30-39 years (47.82%) followed by 20-29 years (28.98%). Most of them were primary educated (60.86%) and housewives (78.26%).

Table 2: Sociodemographic variables of spouse of the cases.

Variable	Total cases (n=69)	Percentage
Age range		
20-29	20	28.98%
30-39	33	47.82%
40-79	15	21.73%
60-70	1	1.44%
Education		
Illiterate	14	20.28%
Primary	42	60.86%
Secondary	10	14.49%
Graduate and above	3	4.34%
Occupation		
Housewife	54	78.26%
Unskilled worker	9	13.04%
Skilled worker	3	4.34%
Service	2	2.89%

Duration of alcohol dependence among the cases

We found the duration of alcohol intake among dependent cases in the range from 1-16 years with the mean duration of 4.855±2.97. Majority of the cases had the duration in the range of 1-9 years (86.95%) while 15% of the cases had the duration of dependence >9 years as shown in Figure 1.

Severity of alcohol dependence based on SADD score

We found that majority of the cases had severe level of alcohol dependence (47.82%) followed by moderate level of dependence (44.92%) as shown in Table 3. The mean SADD score was 23.14±9.89 with the range of 7-60.

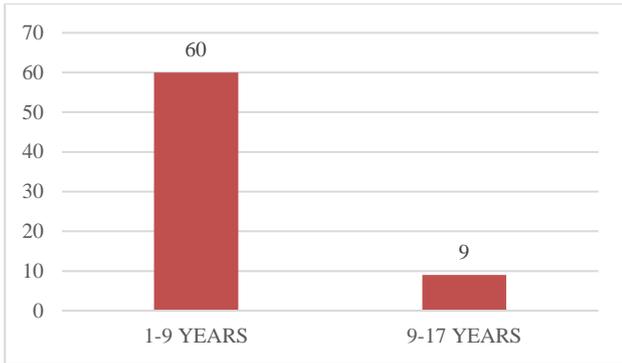


Figure 1: Duration of alcohol dependence among the cases.

Table 3: Severity of alcohol dependence based on SADD score.

Alcohol dependence	Count	Percentage
Low	5	7.24%
Moderate	31	44.92%
Severe	33	47.82%
Total	69	100%

Psychiatric morbidity among the spouse of the alcohol dependent cases according to ICD-10

Most of the spouse of the alcohol dependent cases had psychiatric morbidities (60.86%) according to the ICD-10 criteria as shown in Figure 2.

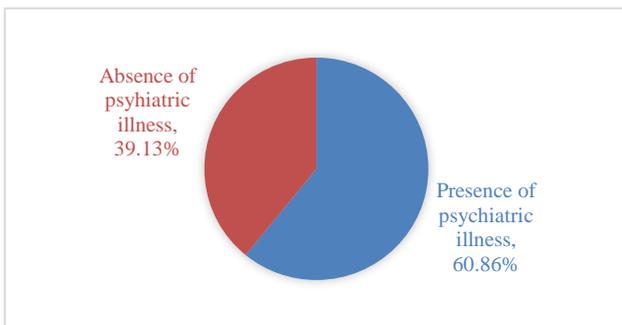


Figure 2: Psychiatric morbidity among the spouse of the alcohol dependent cases according to ICD-10.

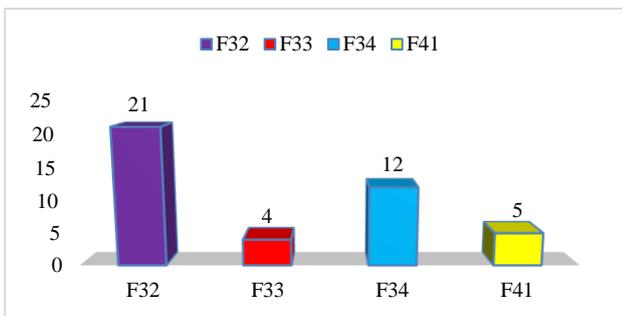


Figure 3: Psychiatric morbidities according to ICD-10 criteria.

Looking at the individual diagnosis we found that majority of the cases were suffering from depressive disorder F32 (30.43%; n=21) followed by persistent mood disorder F34 (17.39%; n=12). Other anxiety disorder F41 was present in 7.24% (n=5) of the cases while recurrent depressive disorder F33 was present in 5.7% (n=4) of the cases as shown in Figure 3.

Association and correlation between marital satisfaction on MSS in spouses and severity of alcohol dependence in men

We found the mean of the MSS score to be 27.17±4.68 which was towards the lower end of the scale indication lesser degree of marital satisfaction. The mean of MSS score in cases having low degree of dependence was higher (38.40±0.54) as compared to those having severe degree (23.42±1.803) and moderate degree (29.35±2.09) of dependence as shown in Table 4. On applying the ANOVA test the difference between the groups was found to be statistically significant (p<0.0001).

Table 4: Correlation between marital satisfaction on MSS in spouses and severity of alcohol dependence in men.

Severity of alcohol dependence	Mean of MSS score	P-value	P-value significance
Low	38.40±0.54	<0.0001	Statistically significance
Moderate	29.35±2.09		
Severe	23.42±1.803		

Association and correlation between duration of alcohol abuse and severity of dependence

Since very few cases were there having low degree of alcohol dependence hence for the purpose of applying statistics we combined the cases having low and moderate degree of dependence as one category. We found that majority of the cases with 1-9 years of alcohol dependence had low/moderate degree of dependence (55%) while majority of those with >9 years of dependence had severe dependence (66.66%) as shown in Table 5. On applying chi square test the p value was found to be 0.296 which was not statistically significant.

Association and correlation between severity of alcohol dependence and psychiatric morbidity in spouse

We found that majority of the spouses of the alcoholic cases who suffered from psychiatric illness according to ICD-10 criteria had severe dependence (52.38%) in their husbands while most of the spouses with absence of psychiatric illness had low/moderate dependence (59.25%) in their husbands which is shown in Table 6. However, the p-value obtained was 0.459 which was not statistically significant.

Table 5: Correlation between duration of alcohol abuse and severity of dependence.

Years of alcohol dependence	Low/ moderate dependence	Severe dependence	Total	P-value	P-value significance
1-9 years	33(55%)	27 (45%)	60 (100%)	0.296	Not statistically significant
>9 years	3 (33.33%)	6 (66.66%)	9 (100%)		

Table 6: Correlation between severity of alcohol dependence and psychiatric morbidity in spouse.

Presence of psychiatric morbidity	Low/ moderate dependence	Severe dependence	Total	P-value	P-value significance
Absent	16 (59.25%)	11 (40.74%)	27 (100%)	0.459	Not statistically significant
Present	20 (47.61%)	22 (52.38%)	42 (100%)		

Table 7: Correlation between duration of alcohol dependence in cases and psychiatric morbidity in spouse.

Duration of alcohol dependence (in years)	Presence of psychiatric morbidity	Absence of psychiatric morbidity	Total	P-value	P-value significance
1-9	35 (58.33%)	25 (41.66%)	60 (100%)	0.466	Not statistically significant
> 9	7 (77.77%)	2 (22.22%)	9 (100%)		

Association and correlation between duration of alcohol dependence in cases and psychiatric morbidity in spouse

Table 7 shows the association and correlation between duration of alcohol dependence in cases and psychiatric morbidity in their spouse we found that majority of the spouses of the alcoholic cases with presence of psychiatric illness according to ICD-10 had >9 years of alcohol dependence (77.77%) in their husbands as compared to 1-9 years of alcohol dependence (58.83%). Most of the spouses who did not have any psychiatric illness had 1-9 years of alcohol dependence (41.66%) in their husbands. However, the p-value obtained was 0.466 which was not statistically significant.

DISCUSSION

Present study was a hospital-based, cross-sectional study in which 69 subjects who fulfilled the International Classification of Disease and Related Health problems (ICD-10) criteria for alcohol dependence were selected consecutively along with their spouse.² In present study we found that majority of the men with alcohol dependence were from the age range of 40-49 years (40.57%) followed by 30-39 years (31.88%). Sarkar et al in their study from Eastern India found that majority of the alcohol dependent cases were from the age group of 20-49 years (85%) similar to our results.⁴ Another study from Bangalore, India found preponderance of the alcoholic cases in the age range of 20-50 years.⁵ We found that majority of the cases were primary educated (50.72%) while occupation wise most of the cases were unskilled workers (37.68%). Sarkar et al found similar prevalence of alcohol dependence in illiterate

cases (45.99%) and unskilled labours (55.08%).⁴ Kishor et al from Karnataka, India reported higher prevalence of alcohol dependence (70%) in cases who were unskilled labours.⁶ Most of the alcohol dependence cases in present study were from lower middle socioeconomic status (44.92%) followed by lower class (27.53%). Various studies across India have reported a similar result of higher dependence in cases belonging to lower socioeconomic status.⁴⁻⁶ Most of the cases in this study were from rural background (69.56%) and belonged to joint family (69.56%). This might be explained by the fact that most of the families in Barak valley are agriculture based rural population. Present findings of higher prevalence of alcohol dependence is against the common belief that joint family structure protects the individual from the substance abuse and dependence. Since most of the subjects were from lower/lower middle socio-economic status exposed to various physical, psychological and financial stressor alcohol consumption may be a process to ameliorate distress, anxiety and depression associated with these stressors. It may also reflect an easy and cheap mode of recreational activity available to the study population. Thus, present findings reflect more of the socio-economic condition rather than the family dynamics.

Looking at the sociodemographic variables of the wives of the cases we found that most of them were in the age range of 30-39 years (47.82%) with the mean age of 33.91±7.86 years, primary educated (60.86%) and housewives (78.26%) by occupation. Kishor et al in their study from Karnataka, India found that mean age of the spouse to be 32 years±5.8 years, educated up to 10th standard (87%) and housewives or unskilled employees

(97%) which is almost similar to our results.⁶ Tyagi et al from Rajasthan, India reported the mean age of the spouse of the alcohol dependent cases to be 30.67±8.12 years while Sedian et al from Nepal reported the majority of the spouse of the alcoholic cases to be in the age group of 30-39 years (34.78%) similar to present findings.^{7,8} Both these studies also found that most of the wives were primary educate and housewives/unskilled labours by occupation which is in accordance to present results.^{7,8}

We found that the mean duration of alcohol dependence among the cases to be 4.855±2.97 with majority of the cases having the duration in the range of 1-9 years (86.95%). Kishor et al from Karnataka, India reported that a mean duration of alcohol dependence among the cases was 4 years (±3.4) which is almost similar to present study while Tyagi et al from Rajasthan, India found the mean duration to be 9.60±2.79 years which is higher than present results.^{6,7} On applying SADD we observed that majority of the cases had severe level of alcohol dependence (47.82%) followed by moderate level of dependence (44.92%). Almost similar results were reported by Kishor et al in their study.⁶

60.86% of the spouse of the alcohol dependent cases had a psychiatric morbidity as per ICD-10 diagnostic criteria with majority of them suffering from depressive disorder F32 (30.43%) followed by persistent mood disorder F34 (17.39%). While there are large number of studies regarding the presence of psychiatric morbidities in the alcohol abusers a very few studies have tried to explore the co-morbid psychiatric illness in the spouses of the alcoholics especially in India. A study by Sedian from Nepal reported that majority of wives of the alcoholics to be suffering from Depressive disorder.⁸ Similar results were reported by Maes et al and Dawson et al from United States and Mexico.⁹⁻¹⁰ Among the Indian studies Tyagi et al from Rajasthan and Kishor et al from Karnataka reported higher prevalence of depression and anxiety disorder among the spouse of the alcohol dependent cases which is similar to present findings.^{6,7}

We found a lower level of marital satisfaction among the spouses of the alcoholic cases with the mean of the MSS score to be 27.17±4.68. Also the mean of MSS score in cases having low degree of dependence was higher (38.40±0.54) as compared to those having severe degree (23.42±1.803) and moderate degree (29.35±2.09) of dependence which was highly statistically significant ($p < 0.0001$).¹¹

Among the international studies Leonard et al, Jacob et al, Goering et al and Tubman have reported a similar lower level of marital satisfaction and higher marital conflict among the spouse of the alcohol dependent men.¹²⁻¹⁴ Among the Indian studies Kishor et al from Karnataka, India found the mean of the MSS score in the spouses to be 26.7±12.8 thus suggesting lower level of marital satisfaction and also reported that marital satisfaction decreased as severity of dependence

increased which is almost similar to our findings.⁶ On trying to find the association and statistical correlation between duration of alcohol abuse and severity of dependence we observed that majority of cases with >9 years of dependence had severe dependence (66.66%). Thus, increase in the years of alcohol consumption made the person physically and psychologically dependent on the substance with increasing severity of dependence which is similar to the literature.¹⁶

We also found that majority of the spouses of the alcoholic cases who suffered from psychiatric illness according to ICD-10 diagnostic criteria had >9 years of alcohol dependence (77.77%) and severe level of dependence (52.38%) (based on SADD score) in their husbands. However, these findings were not statistically significant. ($p < 0.05$). Among the Western studies Epstein et al from United States and Tempier et al from Canada have found a correlation between duration of alcohol dependence and marital discord similar to present results while among the Indian studies Bhowmick et al from New Delhi, India reported the same.¹⁷⁻¹⁸ Thus development of psychiatric morbidity in spouse of the alcoholic cases has a multifactorial aetiology highlighting the inter-relationship between the severity of alcohol dependence, duration of alcohol dependence and presence of psychiatric morbidities in spouse.

To sum up majority of the alcohol dependent cases in present study were from the age group of 40-49 years, belonging to Hindu religion, from rural background, having joint family type with primary level of education, unskilled labours who were belonging to lower/lower middle socio-economic class. Most of the spouses of these alcoholics were from the age range of 30-39 years, having primary education and housewives. Most of the alcoholics had 1-9 years of alcohol dependence and severe alcohol dependence based on SADD score. Majority of the spouses of the alcoholics suffered from psychiatric illness with the most common diagnosis being depressive disorder based on International Classification of Disease and Related Health problems (ICD-10) criteria.² Most of the spouses had lower level of marital satisfaction and presence of marital dissatisfaction was significantly associated with a more severe dependence among their alcoholic husbands. Increased duration of alcohol consumption was associated with higher severity of alcohol dependence. Also, the presence of psychiatric morbidity in the spouses was associated with increased years and higher severity of alcohol dependence.

CONCLUSION

It is often seen that importance is given on the treatment and management of alcoholics, but the kind of distress that occurs in the spouses is often overlooked. Due to this, the psychiatric distress and morbidity in the spouses is on the rise. Thus, this kind of study is important and is a first of its kind in Barak Valley, Southern Assam, India. It was found that majority of the spouses of the alcoholics

suffered from depression and most had a lower level of marital satisfaction. These problems should be looked after as part of the alcohol treatment program. This will be beneficial in the long run in the treatment outcome of the individuals suffering from alcohol dependence syndrome. If the spouses are psychologically healthy, a good support system is ensured for them which is necessary to maintain motivation levels to leave alcohol. Such an initiative will not only address the needs of this neglected population, but also involve them in the treatment process.

However, this study had few limitations. Since present study was done at a tertiary care hospital it may not reflect actual pattern of socio-demographic variables of the alcohol-dependent cases and their wives well as the prevalence of psychiatric morbidities and marital dissatisfaction in the spouse, prevalent in the community. The number of study subjects taken were few and no control was taken to compare our findings. Also since our study was a cross-sectional study, no treatment and follow-up of the spouse of the dependent cases suffering from the psychiatric morbidities was not done. Hence more number of prospective studies involving larger number of cases with proper follow up need to be conducted for detailed evaluation in this context.

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REFERENCES

- World Health Organisation. WHO Regions Country Profiles. 2014;1-202.
- Organization WH. The ICD-10 classification of mental and behavioural disorders: clinical descriptions and diagnostic guidelines. World Health Organization. 1992;1-267.
- How to cite GraphPad Prism. http://www.graphpad.com/guides/prism/7/user-guide/index.htm?citing_graphpad_prism.htm.
- Sarkar A, Sen S, Mondal S, Singh O, Chakraborty A, Swaika B. A study on socio-demographic characteristics of alcoholics attending the de-addiction center at Burdwan medical college and hospital in West Bengal. Indian J Public Health. Medknow Publications and Media Pvt. Ltd.; 2013;57(1):33.
- Johnson PR, Banu S, Ashok MV. Severity of alcoholism in Indian males: Correlation with age of onset and family history of alcoholism. Indian J Psychiatry. Medknow Publications; 2010;52(3):243-9.
- Kishor M, Pandit L V, Raguram R. Psychiatric morbidity and marital satisfaction among spouses of men with alcohol dependence. Indian J Psychiatry. 2013;55(4):360-5.
- Tyagi A, Mehta S. Brief report "I drink, you suffer": impact of partner's alcohol consumption on spouse. 2013;4:45-6.
- Sedain C. Study of Psychiatric Morbidity of Spouse of Male Alcoholic Patients in Nepal. J Chitwan Med Coll. 2013;3(3):10-3.
- Maes HH, Neale MC, Kendler KS, Hewitt JK, Silberg JL, Foley DL, et al. Assortative mating for major psychiatric diagnoses in two population-based samples. Psychol Med. 1998;28(6):1389-401.
- Dawson DA, Grant BF, Chou SP, Stinson FS. The impact of partner alcohol problems on women's physical and mental health. J Stud Alcohol Drugs. 2007;68(1):66-75.
- Leonard KE, Eiden RD. Marital and family processes in the context of alcohol use and alcohol disorders. Annu Rev Clin Psychol. 2007;3:285-310.
- Jacob T, Leonard KE. Alcoholic-spouse interaction as a function of alcoholism subtype and alcohol consumption interaction. J Abnorm Psychol. 1988;97(2):231-7.
- Goering P, Lin E, Campbell D, Boyle MH, Offord DR. Psychiatric disability in Ontario. Can J Psychiatr. 1996 Nov;41(9):564-71.
- Tubman JG. Family risk factors, parental alcohol use, and problem behaviors among school-age children. Fam Relat [Internet]. 1993;42(1):81.
- Sadock BJ, Sadock VA, Ruiz P. Kaplan and Sadock's Comprehensive Textbook of Psychiatry. Psychiatr Interpers Biol Process. 2000;II:4884.
- Epstein EE, McCrady BS, Hirsch LS. Marital functioning in early versus late-onset alcoholic couples. Alcohol Clin Exp Res. 1997;21(3):547-56.
- Tempier R, Boyer R, Lambert J, Mosier K, Duncan CR. Psychological distress among female spouses of male at-risk drinkers. Alcohol. 2006;40(1):41-9.
- Bhowmick P, Tripathi BM, Jhingan HP, Pandey RM. Social support, coping resources and codependence in spouses of individuals with alcohol and drug dependence. Indian J Psychiatry. 2001;43(3):219-24.

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