

## Anxiety and depression in spouses of males diagnosed with alcohol dependence: a comparative study

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### Summary

**Aims:** In this study, we aim to compare the proportion of anxiety and depression among spouses of males with alcohol use disorder and spouses of males without alcohol use disorder.

**Materials and methods:** We conducted a comparative study on patients attending the general practice OPD of an urban tertiary care hospital. Two groups were compared – wives of men with alcohol use disorder (diagnosed by DSM-5) and wives of men without alcohol use disorder. Semi-structured questionnaires, PHQ-9 and GAD-7, were administered.

**Results:** In total, 58 women (38%) married to men with alcohol use disorder reported depression and 89 women (59%) reported anxiety, as opposed to 26 (17%) and 58 (38%) women married to men without alcohol use disorder. The difference was significant, with odds ratio at 3.01 and 2.31 respectively.

**Discussion:** The rates found were comparable to previous studies. However, the current study better elucidates the causality of psychiatric morbidity among spouses of men with alcohol dependence as it is a comparative study.

**Conclusion:** Wives of men with alcohol use disorder show significantly higher rates of both depression and anxiety when compared with wives of men without alcohol use disorder. This increased psychiatric morbidity affects not only the individual but the entire family unit, reduces effective participation in treatment and affects the overall quality of life of the family. Thus, it is important to be vigilant about it and intervene in a timely manner.

**psychiatric morbidity, caregivers, alcohol abuse, alcohol dependence, spouse burden**

### INTRODUCTION

The Indian perception of alcohol and its consumption can best be described by the term ‘ambivalent drinking culture’, i.e. alcohol consump-

tion is frowned upon socially with most maintaining complete abstinence. However, those who do drink tend to do so excessively [1]. This leads to a situation where alcohol use disorder is a significant health problem in our country. This condition has wide-ranging consequences not only for the one who drinks, but also for their entire family [2,3]. A wide range of psychiatric problems has been reported in wives of patients with alcohol dependence, with mood and anxiety disorders being predominant, along with

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decreased marital satisfaction [2]. A lot of these problems may be associated with the social consequences of their husbands' drinking problem, such as higher rates of aggression and violence, in particular intimate partner violence [4–6].

There are few Indian studies regarding higher psychiatric morbidity in family members of individuals with alcohol dependence. The uniqueness of the current study is that we have compared the rates of depression and anxiety among spouses of males with alcohol use disorder with spouses of males without alcohol use disorder to shed more light on the relationship between the husband's substance use problems and psychiatric morbidity in the spouse. Comparative studies such as this have not been conducted on the Indian population before.

In this study, we aim to compare the proportion of anxiety and depression among spouses of males with alcohol use disorder with rates of depression and anxiety among spouses of males without alcohol use disorder. We hypothesize that the rates of depression and anxiety will be higher in the first group.

## METHOD

### Study setting and design

This is an observational cross-sectional study conducted in a tertiary care hospital in an urban area. The hospital caters to an entire district of Gujarat along with some neighboring areas. Gujarat, a state in India, has been under prohibition laws since the 1980s and alcohol is not legally available. However, it has been found that rates of alcohol dependence are not very different from those states which are not under prohibition [7].

### Study population

The study was conducted on spouses of males attending the general practice OPD of the hospital. Both study and comparison samples were drawn from the same population (i.e. patients attending the general practice OPD) to make them comparable in terms of age, sociodemographic and other variables and to expedite the matching process. The study included all patients who were aged 18 and above, gave written informed con-

sent and came with their spouse. Those who did not give written informed consent were excluded. The spouses in both groups who had a history of another psychiatric disorder prior to marriage or a chronic medical illness as assessed by an initial brief interview, were also excluded. Males with comorbid psychiatric conditions (dual diagnosis) were excluded. This included those males who had any other substance use disorder other than nicotine. In the comparison group, males who had an independent psychiatric condition or any other chronic disease were excluded.

## TOOLS USED

A pre-tested semi-structured questionnaire was used to collect sociodemographic data and the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) was used to diagnose alcohol use disorder in males whose spouses participated in the study.

The Patient Health Questionnaire 9 (PHQ-9) – Hindi and Gujarati versions were then used to assess the presence of depression. The PHQ-9 is widely used to screen for depression and has adequate sensitivity and specificity at a cut-off score of 10 [8]. Anxiety was measured by GAD-7 – Hindi and Gujarati versions. GAD-7 was part of the PRIME-MD which was used to assess for common mental disorders. The GAD-7 comprises questions intended to diagnose generalized anxiety disorder, but it was found to be a reasonably good screener for social anxiety, panic and post-traumatic stress disorder [9].

Permission was sought from the Institutional Ethics Committee for Human Research (IEH-CR). Written informed consent was taken from all study participants after the nature and purpose of the study as well as their role in it had been explained to them.

## DATA COLLECTION

Every second male patient attending the CPGP OPD (curative and preventive general practice OPD) was interviewed after giving written informed consent. They were then assessed using DSM-5 to determine whether they fulfilled the criteria for alcohol use disorder. Patients were clini-

cally assessed for the presence of comorbid conditions, use of other substances, and chronic medical conditions. Those who fulfilled the inclusion criteria were informed about the nature and purpose of the study and designated as the case group while permission was sought from them to speak to their spouses regarding the study. They were also informed that non-participation in the study would not affect the quality of the treatment that they were to receive and that they were free to exit the study at any time. They were assured that their responses and those of their spouse would remain confidential. Once permission was obtained, spouses were informed about the study and their role in it, and written informed consent was requested from them. Only those who gave such consent were included in the study. The semi-structured questionnaire, the PHQ-9 and GAD-7 were administered. Each patient was allocated a minimum of one hour for this interview.

Male patients who did not meet the criteria for alcohol use disorder and did not have other comorbid conditions or chronic physical illnesses, based on history and examination, were designated as the comparison group. They were informed about the aforementioned points regarding the study. Permission was sought to interview their spouses. All patients who were found to have any other psychiatric illness or other chronic disease were excluded from the study. After obtaining a similar written informed consent from their spouses, they were interviewed using the same tools as the previous group.

Women who were found to screen positive for anxiety and depression were advised to attend

the psychiatric OPD for further examination and management.

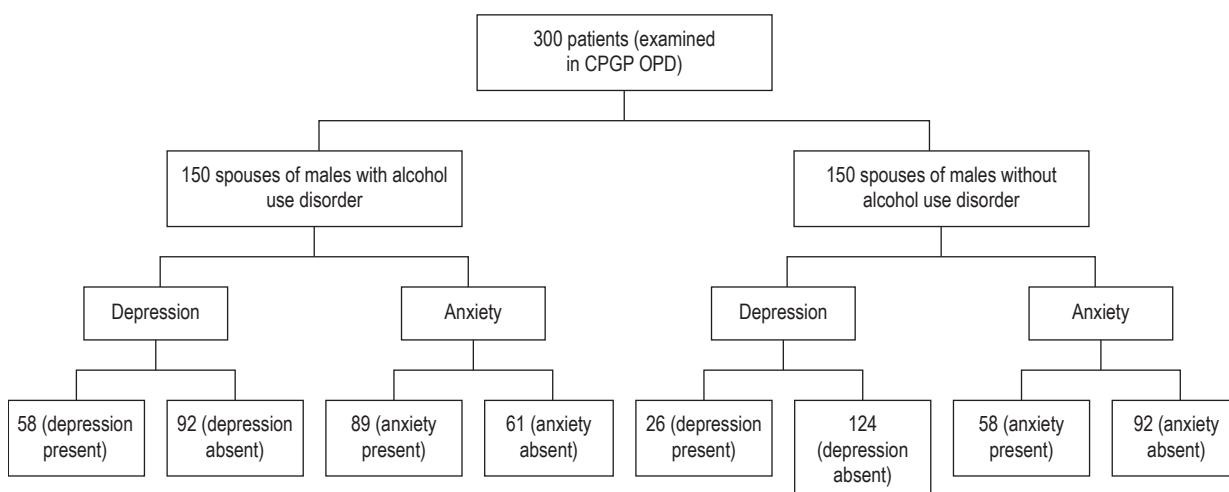
## ANALYSIS

The data were entered into an Excel spreadsheet and analyzed using STATA-IC. Descriptive statistics were used to elucidate the sociodemographic characteristics of the sample. Chi-square values and odds ratios were calculated for the presence of anxiety and depression between the two comparison groups.

## RESULTS

### Sociodemographic characteristics of the sample

Overall, 150 patients were interviewed in each group, making a total of 300 participants in the study. Of spouses of males with alcohol use disorder, 111 (74%) were Hindus, 34 (22.67%) were Muslims and the remainder were of other religions. The mean age was 38.14 years ( $\pm 7.73$ ); 21 participants (14%) lived in nuclear families; 24 (16%) of the women did not work outside the house. The majority (101, 67.33%) reported that they suffered from some sort of financial stress. Twenty-two women (14.77%) reported that they came from broken homes prior to their marriage. Most of the women interviewed were married for 10–20 years (50%) and 103 women (68.67%) reported physical abuse at the hands of their husbands.



**Figure 1.** Distribution of all the participants in the study according to their diagnoses

## Depression

Our study found that 58 women who were married to men with alcohol use disorder and 26 women who were married to those without al-

cohol use disorder suffered from depression as measured by PHQ-9. The difference was found to be significant ( $p < 0.05$ ). The odds ratio was calculated at 3.01 (95% CI 1.75 – 5.14) and was found to be significant ( $p = 0.0001$ ).

**Table 1.** Comparison of proportion of depression among spouses of males with alcohol dependence with spouses of those without alcohol dependence: (original)

	Depression Present	Depression Absent	Chi-square	P value
Wives of males with alcohol dependence	58	92	15.89	0.0001
Wives of males without alcohol dependence	26	124		

## Anxiety

On examining anxiety using GAD-7, we found that 89 women married to men with alcohol use disorder suffered from anxiety as opposed to 58

women who were married to men without alcohol use disorder; the difference was found to be significant. The odds ratio for anxiety was calculated at 2.31 (95% CI 1.46 – 3.68), which was also highly significant ( $p = 0.0004$ ).

**Table 2.** Comparison of proportion of anxiety among spouses of males with alcohol dependence with spouses of those without alcohol dependence (original)

	Anxiety Present	Anxiety Absent	Chi-square	P value
Wives of males with alcohol dependence	89	61	12.005	0.0005
Wives of males without alcohol dependence	58	92		

## DISCUSSION

Our study found that spouses of males with alcohol use disorder had a significantly higher rate of both depression and anxiety when compared with spouses of males without alcohol use disorder, as previously hypothesized. The odds ratios calculated between the two groups revealed that there was a greater chance of depression (OR=3.01) and anxiety (OR=2.31) among the spouses of males with alcohol use disorder as opposed to those without alcohol use disorder.

Only a few comparative studies have been conducted on this topic. One such study was conducted in Singapore and assessed spouses of males in treatment for alcohol dependence. They found similar results, with spouses of those with alcohol dependence having higher rates of depression, psychiatric morbidity and stress along with lower scores on physical and psychological well-being [3]. Moos et al. conducted a study on older adults but found similar results, that is,

spouses of those men who continued drinking had greater depression and poorer overall health when compared with spouses of men who never drank as well as those men who had stopped drinking several years back [10]. While the population of this study was different from ours, the results are still significant as this was a longitudinal study.

However, a study by Cornelius et al. had different conclusions. When they compared wives of males with substance use disorders with wives of those without substance use disorder, they found that rates of substance use were much higher among the wives of men with substance use disorder along with co-occurring depression and anxiety. However, the rates of depression or anxiety ('pure', i.e. without comorbid substance use disorders) were not significantly different in the two groups [11]. Our results can be explained by cultural differences in the sample populations studied. In India, it is a cultural norm that women do not consume al-



cohol. Hence, it would be redundant to assess for substance use disorders among spouses of alcohol dependent men. The women interviewed came from the lower socio-economic strata, where they do not work outside of the home and are not financially independent. Hence, the threat on their financial security posed by a husband who is dependent on alcohol also makes them vulnerable.

The proportion of depression among spouses of men with alcohol use disorder in this study was found to be 38.67% (58 patients), whereas the proportion of anxiety was 59.33% (89 patients). These rates are comparable with some of the previous studies conducted on this topic. Kishore et al. found that 65% of the women studied using SCID had some psychiatric morbidity, with major depression in 43.3% of the women, dysthymia in 35% and panic disorder in 15%. The spouses also reported poorer marital satisfaction, which was inversely related to the severity of alcohol dependence in their husbands [12]. An increase in the absolute rates found can be explained by the fact that only screening tests were used in this study. Another study conducted in Sri Lanka found that 33.3% of the women studied suffered from major depression, which was significantly correlated with their husbands' morning drinking and increasing age but not related to intimate partner violence (both verbal and physical) [13]. Another study conducted in Nepal showed that women married to men with alcohol dependence had significant rates of depression (28.26%), conversion disorder (10.86%) and anxiety (8.7%) [14]. However, these rates are far lower than the ones found in our study as well as in other literature from the region.

On comparing with Western literature, both similar and contradictory results were obtained. Tempier et al. noted that there were higher levels of psychological distress such as depression, anxiety, aggressiveness and cognitive impairment, among wives of male at-risk drinkers [15]. Kahler et al. also found similar results with greater psychological distress in spouses of men with alcohol dependence. This in turn was associated with decreased marital satisfaction, intimate partner violence, less social support and, surprisingly, decreased severity of alcohol problem in their male partners [16]. Likewise, Dawson et al. reported that women who were mar-

ried to or lived with men who had alcohol use problems suffered from poorer physical as well as mental health. Poorer physical health was indicated by greater odds of injury and victimization, whereas poorer mental health and psychological well-being were represented by greater levels of anxiety, depression and lower quality of life scores. There was a significant correlation with life stressors as well. However, odds ratios for depression and anxiety decreased when the women's alcohol use was taken into account [17]. This was unlike our study where none of the women reported consuming any alcohol. Another study found that individuals who had a person who drank heavily in their social circle suffered from poorer self-reported well-being and higher levels of depression and anxiety. This relationship was strengthened by the nearness of the relationship and presence of adverse consequences of drinking [18]. However, one study conducted in Norway showed that respondents only reported higher levels of depression and anxiety if their drinking patterns were different from those of their partners [19]. However, these results may not be very relevant for comparison as none of the women in this study reported consuming any alcohol.

A longitudinal study conducted by Homish et al. reached the conclusion that depressive symptoms in wives were significantly associated with husbands' marital drinking problems, but not other alcohol problems. The symptoms were also associated with husbands' heavy drinking and their own heavy drinking at the cross-sectional analysis but the same association was not found over time [20].

## LIMITATIONS

The instruments used to assess for anxiety and depression were screening tests, which may have overestimated the subjective reporting of these two conditions. This is a cross-sectional study and hence only associations can be elucidated and causation cannot be commented upon. Despite these limitations, this preliminary investigation sheds light on the fact that psychiatric morbidity in spouses of patients with alcohol dependence is an issue that needs further study and attention in clinical practice.

## CONCLUSIONS

Based on this study we can conclude that wives of men with alcohol use disorder have significantly greater chances of developing depression and anxiety when compared with wives of men without alcohol use disorder. This is important as an increased psychiatric morbidity in women affect not only them but the entire family unit, with long-standing consequences. In India, mental well-being of the wife is largely neglected, especially when they are seen as a caregiver rather than as a patient, as is the case with the wives of men with alcohol use disorder. Improving their physical and mental well-being may have positive outcomes on their quality of life as well as increase their participation in the treatment of their husbands' problems.

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