The prevalence of anxiety, depression and co-dependence among spouses of male patients with alcohol dependence syndrome at a tertiary care hospital in Nepal: A cross-sectional study

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Abstract

Introduction

Excessive use of alcohol is a major public health concern worldwide. Alcohol dependence is a constant source of stress for the families of alcohol users with dependence and makes them more vulnerable to psychological problems such as depression, anxiety and co-dependence. This study explores the prevalence of anxiety, depression and co-dependence among spouses of male patients with alcohol dependence syndrome.

Methodology

A cross-sectional study was conducted among 93 spouses of male patients with alcohol dependence syndrome seeking treatment at the Department of Psychiatry, Tribhuvan University from November 2020 to October 2021. A semi-structured clinical proforma was used to collect data and a validated Nepali version of Hospital Anxiety and Depression Scale (HADS) was used to assess anxiety and depression. ICD-10 DCR and the Spann-Fischer Codependency Scale were employed to categorize anxiety disorders and depressive disorders and to assess codependence, respectively.

Results

The prevalence of anxiety disorders and depressive disorders were 33.3% and 19.4% respectively. The most common type of anxiety disorder was generalized anxiety disorder (12.9%), and most had mild depressive episodes (10.8%). Codependency was found in all the participants with 65.6% medium codependency and 34.4% high codependency. Both anxiety disorders and depressive disorders were positively correlated with the level of codependence ($p < 0.05$).

Conclusion

A significant proportion of spouses of male patients with alcohol dependence syndrome suffer from anxiety and depression and have high codependence. The findings emphasize the need for integrated mental health, family support and counselling interventions for the spouses of male patients with alcohol dependence syndrome.

Keywords

Alcohol, Anxiety, Co-dependence, Depression, Nepal

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INTRODUCTION

Excessive alcohol use is a major public health concern in most countries today, excessive intake of alcohol can lead to alcohol-related disorders, which can cause a variety of medical, psychological, and social issues.[1] Harmful alcohol usage caused 3 million fatalities worldwide and 132.6 million disability adjusted life years (DALYs), accounting for 5.1 % of all DALYs in 2016. Alcohol use is one of the major risk factors for non-communicable diseases, it was responsible for 7.2 % of all premature (under 69 years) mortality worldwide in 2016.[2]

Alcohol dependence is regarded as a constant source of stress, not only for the individual, but also for family members. Because of the close nature of their relationship and the continual exposure to the alcohol dependent person's behavior, spouses are particularly affected. In the South-Asian region, including Nepal, the consequences and negative effects on the mental health of spouses of men having alcohol dependence are often overlooked. Improv-

ing mental health and well-being of spouses may improve their quality of life as well as increase their involvement in the treatment of their husbands' problems.[3]

Family and other interpersonal problems, work troubles, violent and other crimes, and social marginalization are all important determinants linked to alcohol dependence. A person's drinking pattern can have negative consequences in his or her own life, such as disrupting marriage and family life, causing job loss and unemployment, triggering the commission of violence and crime that results in arrest, or precipitating homelessness or other forms of marginalization or stigmatization. Similarly, it can result in a decline in family members' quality of life. Despite this, there is a striking lack of focus on the impact on spouses.[4]

Given that the majority of spouses of patients with alcohol dependence are also caregivers, any psychopathology that arises in them as a result of poor marital adjustment and life satisfaction seriously impairs their capacity to care for and get their loved one's help.[5] The spouses of people who suffer from alcohol dependence suffer from unfavorable consequences because of their constant alcohol consumption. Understanding and resolving the mental health difficulties of spouses of those with alcohol dependence will not only reduce their burden, enhance their coping abilities, and improve their general quality of life, but it will also likely have an impact on the treatment and outcome of alcohol dependent patient.[5,6]

The proportion of the global population living with depression is estimated to be 322 million, which is about 4.4% of the world's total population. Globally, depressive disorders rank third among the leading causes of disability; Years lived with disability (YLD) and anxiety disorders stand alone as the sixth largest cause of disability worldwide.[7] Alcohol dependence has a particularly harmful impact on marital lives.[8] When compared to spouses of men without alcohol dependence, spouses of men with alcohol dependence have much greater rates of depression and anxiety. This increased psychiatric morbidity has an impact on not just the person but also the entire family unit, reducing effective treatment participation and lowering the family's overall quality of life.[9]

Most of the spouses of alcohol dependent patients display symptoms of the condition to some degree. Enabling, ignorance about the nature of alcohol dependence, denial, illogical reliance on control, low self-image, and stress-related sickness are some of these characteristics of codependency.[8] Cultural values and societal perspectives appear to play a part in determining the codependent relationship, with culturally propagated submissiveness being proposed as an independent predictor of codependence.[10] The characteristics of a given culture also impact whether a relationship's 'codependence' is unhealthy or simply a component of normal social interaction within the marriage partnership and family.[11] Spouses who live with the substance user have the highest risk of developing or having codependence among close relatives. They are impacted in a variety of ways as a result of substance users' conduct, and they are subjected to the stress of living with a substance user.[12] Several studies have found that the spouses of alcohol dependent patients have high rates of mental and physical disorders, as well as communication issues, limited social activity, and low marital satisfaction.[8] Self-neglect, compulsion and addiction, other self-destructive behavior, sexual dysfunction, and other chronic diseases can all stem from unexpressed shame.[13]

The results of the STEPS survey 2019 on alcohol consumption patterns in Nepal show that almost 1 in 8 men (11.7%) drink daily or almost daily, demonstrating the widespread presence of alcohol consumption among Nepalese adults.[14] However, fewer studies have been conducted on the consequences of alcohol use and its effects on family members and spouses. Therefore, from this study we aimed to determine the prevalence of anxiety, depression and co-dependence among spouses of male patients with alcohol dependence syndrome.

MATERIAL AND METHODS

Study Design and Setting

A cross-sectional study was conducted from November 2020 to October 2021, among spouses of male alcohol dependent patients visiting Tribhuvan University Teaching Hospital (TUTH) for treatment. TUTH is a pioneer and leading tertiary care hospital in Nepal, offering a wide range of specialized medical services that are not available elsewhere in the country. Many patients regularly visit the Department of Psychiatry to access a range of services, including inpatient care, outpatient care, and emergency psychiatric services.

Study Population and Sample Size

Spouses of male patients diagnosed with alcohol dependence syndrome, aged 18 years or older, were included in

the study. Spouses with psychiatric disorders diagnosed before marriage, those of patients with multiple drug dependence excluding nicotine, and those with chronic medical illnesses were excluded from the study.

The sample size was calculated using the Cochrane formula, $n = (Z^2 \times p\ (1 - p)) / d^2$. In this calculation, the expected prevalence (p) was considered 0.587 based on a previous study conducted in Chitwan, Nepal, on the prevalence of psychiatric morbidity in spouses of alcohol dependence syndrome (ADS) patients in 2011.[15] The calculated sample size was determined to be 93. We employed purposive sampling techniques to select participants. All the respondents who met the eligibility criteria, spouses of male patients diagnosed with alcohol dependence syndrome, were enrolled in this study.

Data collection tools and techniques

We employed a self-designed semi-structured proforma for the socio-demographic and clinical variables. Background information such as age, sex, marital status, education, occupation, religion, caste, family type, family support, monthly income, psychiatric illness in the family, the duration of alcohol dependence in the husband, substance use other than alcohol in the husband, and the duration of marriage were collected using this tool.

We utilized the Hospital Anxiety and Depression Scale (HADS), developed by Zigmond and Snaith in 1983, to identify and quantify anxiety and depression in both hospital and general populations. It is a reliable and validated tool, with validation in Nepal conducted by Risal et al., 2015 .[16,17] The HADS consists of 14 items, divided into two subscales of seven items each for anxiety and depression. Each item is rated on a four-point scale from 0-3, with a higher score indicating greater severity. It is a self-administered tool that takes approximately 2-5 minutes to complete. The cut-off scores were 8 for anxiety (specificity 0.78, sensitivity 0.9) and 8 for depression (specificity 0.79, sensitivity 0.83).[16] The scores were interpreted as follows: 0-7= Normal, 8-10= Borderline abnormal (borderline case), and 11-21= Abnormal (case).

The International Classification of Diseases ICD-10 Diagnostic Criteria for Research (DCR) was used for diagnose and assess the severity of mental and behavioral disorders. It provides specific diagnostic criteria outlined in the Clinical Descriptions and Diagnostic Guidelines.[18] In addition, we employed the Nepali-translated version of the Spann-Fischer Codependency Scale, a 16-item self-report instrument designed to measure co-dependency. Each item is rated on a 6-point Likert scale, with scores ranging from 16 to 96, higher scores indicating greater co-dependency. The internal consistency of this tool, as measured by Cronbach's alpha, ranges between 0.73 and 0.80.[19]

Data were collected from the outpatient and inpatient departments of the Department of Psychiatry (both the psychiatry ward and the de-addiction ward) at TUTH in Kathmandu, Nepal. The sample was taken from spouses who visited male patients diagnosed with alcohol dependence syndrome. A total of 93 participants meeting the inclusion criteria were selected. They were provided with an explanation of the nature and importance of the study, and informed consent was obtained from all participants.

Participants were first completed the semi-structured clinical proforma, followed by the HADS. The diagnosis was then confirmed based on the ICD-10 DCR modules for depression and anxiety. The Spann-Fischer Codependency Scale was administered. All assessments were conducted in a single session lasting approximately 30 to 45 minutes.

Statistical analysis

The paper-based collected data were entered into the Statistical Package for Social Sciences (SPSS) version 23 for analysis. Data distribution was assessed for normality, and descriptive statistics, including frequency, mean, and standard deviation, were applied for initial analysis. To examine relationships between continuous variables, the t-test was used, while the chi-square test determined associations between selected categorical variables and outcomes such as anxiety, depression, and codependence. A p-value of less than 0.05 was considered statistically significant for all analyses.

Ethical Clearance

Participation in the study was voluntary and based on informed written consent. Comprehensive information about the study, including the right to withdraw at any time, was provided both in writing and verbally to all participants. Ethical approval was obtained from the Institutional Review Committee of the Institute of Medicine, Tribhuvan University (Reference letter: No 119 (6-11) E2 077/078). All collected information was securely stored by the researcher, individually coded, and maintained in the Department of Psychiatry office at TUTH.

RESULTS

A total of 93 eligible spouses who visited male patients diagnosed with alcohol dependence syndrome were enrolled in this study. Table 1 presents the socio-demographic characteristics of the study participants. Most of the participants belonged to the age group 30-39 years (n=41, 44.1%). The mean age of the sample population was 37.95 ± 7.55 years. An almost equal number of participants were from (n=47) and outside (n=46) the Kathmandu valley. Most participants had attended primary school or were literate (n=30, 32.3%). The duration of alcohol dependence in the husbands of the sample population, most patients with alcohol dependence syndrome had a duration of dependence between 11 to 20 years (n=45, 48.4%).

Table 1: Socio-demographic characteristics of the respondents (n=93)

Characteristics	Frequency (N=93)	Percent
Age (year)		
20-29	14	15.1
30-39	41	44.1
40-49	30	32.3
50-59	8	8.6
Place of residence		
Kathmandu valley	47	50.5
Outside valley	46	49.5
Education level		
Illiterate	17	18.3
Primary	30	32.3
Middle school	19	20.4
High school	11	11.8
Intermediate	12	12.9
Graduate/post-graduate	4	4.3
Occupation		
Profession	2	2.2
Semi-profession	9	9.7
Shop owner	12	12.9
Skilled worker	9	9.7
Semi-skilled worker	18	19.4
Unskilled worker	20	21.5
Unemployed	23	24.7
Ethnicity		
Chhetri	14	15.1
Brahmin	36	38.7
Newar	9	9.7
Mongolian	8	8.6
Others	26	28.0
Religion		
Hindu	73	78.5
Buddhist	10	10.8
Christian	8	8.6
Muslim	2	2.2
Family relationship		
Satisfactory	74	79.6
Unsatisfactory	19	20.4
Duration of ADS in husband (years)		
1-10	43	46.2
11-20	45	48.4
21-30	3	3.2
>30	2	2.2
Total	**93**	**100.0**

HADS A and HADS-D score

The table 2 described the of HADS A and D. Anxiety caseness was found in 33.3% (n=31) `of the total participants. The mean HADS A score in the anxiety caseness group was 12.9±1.739. Depression caseness was found in 19.4% (n=18) of the study population. The mean score in the depression caseness was 12.9±1.568.

Table 2 Characteristics of HADS A and D score

Characteristics	Normal	Borderline case	Anxiety case
HADS A score	43 (46.2%)	19 (20.4%)	31 (33.3%)
Mean	5.3	8.4	12.9
Standard Deviation	1.557	.769	1.739
Range	2-7	8-10	11-17
Characteristics	Normal	Borderline case	Depression case
HADS D Score	58 (62.4 %)	17 (18.3%)	18 (19.4%)
Mean	4.6	8.4	12.9
Standard Deviation	1.903	0.606	1.568
Range	1-7	8-10	11-15

Prevalence of Anxiety and Depressive Disorders and level of Co-dependence

Our study shows that anxiety was present in 33.33% of the participants, while depressive disorder was observed in 19.35% of the participants. Based on the ICD-10 DCR diagnoses of the study population, the most common depressive disorder diagnosis was a mild depressive episode (n=10, 10.8%). Similarly, our results indicate that the most common anxiety disorder diagnosis was generalized anxiety disorder (n=12, 12.9%). Our study reveals that the frequency of medium codependence (n=61, 65.6%) and high codependence (n=32, 34.4%).

The table 3 compares prevalence of anxiety and depression disorder with level of co-dependence. This study shows that 81% of sample population with anxiety disorder had high co-dependence (n=25). The difference between the groups was statistically significant (X2=44.05, p-value=0.0001). Similarly, 83% of sample population having depression had high codependence (n=15). The difference between the groups was statistically significant (X2=23.67, p-value=0.0001).

Table 3: Prevalence of Anxiety, Depression disorder and level of codependence

Characteristics		Level of codependence		Chi-square value	P-value
		Medium	High		
Anxiety disorder	Present	6(19%)	25(81%)	44.05	0.0001
	Not present	55(89%)	7(11%)		
Depressive disorder	Present	3(17%)	15(83%)	23.67	0.0001
	Not present	58(77%)	17(23%)		

DISCUSSION

Anxiety and depressive disorders are public health concerns due to their widespread impact on individuals, families, and communities. The current study found the prevalence rate of anxiety disorder, 33.3%, and depressive disorder, 19.4%, which illustrates that anxiety disorders are common in spouses of male ADS patients and are more prevalent than in the general population, which is about 2% in the Nepalese population and about 3.6% in the world population. [20,21] Similarly, we found depressive disorders are common in spouses of male ADS patients and are more prevalent than in the general population, which is about 3% for MDD in the Nepalese adult population and 4.3% in the world population.[20,21] Our findings of the proportion of anxiety disorders (63.1%) and depressive disorders (36.9%) in the spouses of male ADS patients were consistent with the findings from the study done by Gandhi et. al, which showed the proportion of anxiety among spouses 59.33%, whereas depression to be 38.67%.[9] Our findings of the prevalence of depression are like the findings from a hospital based cross-sectional observational study done by Mammen et. al in 2015; which found 36% of total of 100 spouses had some psychiatric morbidity; mood disorders in 50% (18% of the total sample) and anxiety and related disorders in 36% (12.96% of the total sample) of the total morbidity.[22] Our findings of the prevalence of depressive disorder were slightly lower than findings from a similar cross-sectional study done by Dandu et.al which found that 29.6% of the participants had depressive disorder.[12] A similar study done by Indu et. al in 2018 in South India found 25% of the spouses had major depressive disorder; these results are consistent with the prevalence of the depressive disorder in our studies.[24] In our study, the most common anxiety disorder diagnosis was generalized anxiety disorder (12.9%) followed by unspecified anxiety disorder (11.8%) and panic disorder (6.5%). Very few studies have been done that have sub-classified anxiety disorders using ICD-10 DCR as our studies. Our findings suggest that the majority of depressive disorders are mild in severity. This was consistent with the finding from a cross-sectional study conducted by Tilwani et al.,2021 in India which showed most spouses of ADS patients had mild depression (12%) and dysthymia (45%).[1] Our findings of mild depressive episodes being most common among all depressive disorders in spouses were also more or less similar to the results from the study done by Kaur in 2016 which had found prevalence of 32.1% of mild depressive episodes and also consistent with the positive correlation (r=+0.763) between depression and codependence.[25] A cross-sectional survey conducted to determine the prevalence of depression and co-dependency among the spouses of ADS patients and to investigate the relationship between depression and co-dependency showed that 32% of spouses had depressive disorder and 59% had high codependency, the results were slightly different as compared to our studies; reason might be due to use of different sampling method in that study.[26]

Our findings suggest that spouses with high codependence are at risk of having anxiety and depressive disorders. Our findings are consistent with the findings from a study done by Kaur in 2016 which showed a positive correlation (r=+0.763) between depression and codependence.[26] Our findings in spouses having medium codependence (65.6%) and high codependence (34.4%) were more or less similar to the results from a similar study done by Paul et. al in 2018 in India; 48.75% had medium codependence and 41.25% had high codependence.[27] Our finding slightly differed from the findings of similar study done by Salonia et.al in 2021 which showed that 60% of the spouses had high codependence having SFCS score greater than 52.6.[28] A study done by Zetterlind and Berglund in the Scandinavian region showed a codependence rate of 44% and a similar study done by Bhowmiek et. al in India found that 49 out of 60 spouses had codependence.[29,30] However in our study, we used different tools more focused on the level of codependence rather than the presence or absence of codependence. Our findings of spouses being unemployed having a higher levels of codependence are consistent with the findings from the study done by Bhowmick et. al which found that the chances of being codependent amongst spouses were five times higher if they were unemployed. Unemployment contributes to lower social support to spouses leading to more negative effects of stressors which in turn can give rise to development of codependence.[30]

Our study implies that the high prevalence of depression, anxiety, and co-dependence among spouses of individuals

with ADS has significant impacts on mental health interventions and family dynamics same as the findings from the study conducted by Damodara, N., et al. (2021).[31] Spouses often face chronic stress due to the unpredictable behavior, emotional neglect, and financial instability associated with their partner's alcohol use. This stress can exacerbate psychological distress, leading to anxiety and depressive disorders that impact their well-being and ability to cope effectively. Moreover, co-dependence patterns can perpetuate unhealthy relational dynamics, where the spouse's emotional and behavioral responses inadvertently enable the continuation of the addiction. Addressing these issues requires a holistic approach that integrates family-focused therapeutic interventions alongside addiction treatment. Such strategies can enhance the spouse's resilience, improve relational stability, and foster a supportive environment conducive to the recovery of both the individual with ADS and their family. These findings underscore the need for mental health support tailored specifically for spouses, emphasizing the importance of their role in the broader addiction recovery process.

STRENGTHS AND LIMITATIONS

There are several strengths to our study. First, our study identified the prevalence of anxiety, depression, and codependence and their associations in a tertiary hospital setting in Nepal. Second, we used validated standard tools, such as the HADS to identify and quantify anxiety and depression, and the Spann-Fischer Codependency Scale to measure co-dependency, which also reflects the feasibility of these tools in our local context. Despite the strengths of our study, there are some limitations. Our findings may not be generalizable as the study setting was limited to only one hospital in Nepal. Additionally, since our study was cross-sectional, it could not establish a cause-effect relationship between ADS in husbands and depression, anxiety disorders, or codependence in spouses. Consequently, a bidirectional relationship could not be explored.

CONCLUSION

This study reported that 33.3% of spouses of patients with alcohol dependence syndrome suffered from anxiety disorders, and 19.4% experienced depressive disorders. These prevalence rates are notably higher than those observed in the general population. Given these findings, it is evident that a significant proportion of spouses are affected by psychiatric morbidities, an issue that has often been overlooked. The findings of this study suggest that integrated mental health, family support, and counseling interventions are necessary to address the mental health needs of spouses, ensuring a more holistic and effective approach to the treatment and recovery process for families affected by alcohol dependence syndrome.

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CONFLICT OF INTEREST

The authors have declared that no competing interests exist.

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