ORIGINAL ARTICLE

Oman Medical Journal [2018], Vol. 33, No. 6: 512-519

Characteristics and Correlates of Psychiatric Problems in Wives of Men with Substance-related Disorders, Kermanshah, Iran

Toraj Ahmadi Juibari, Behrouz Behrouz, Mari Attaie, Vahid Farnia, Sanobar Golshani, Masuod Moradi and Mostafa Alikhani*

Substance Abuse Prevention Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran

ARTICLE INFO

Article history:
Received: 14 September 2017
Accepted: 10 July 2018

Online:
DOI 10.5001/omj.2018.93

Keywords:
Epidemiology; Mental Disorders; Women; Substance-related Disorders.

ABSTRACT

Objectives: We sought to evaluate the characteristics and correlates of psychiatric problems in the wives of men with substance-related disorders. ***Methods:*** Four-hundred and fifty women whose husbands had substance-related disorders were selected by purposive sampling for inclusion in the study. ***Results:*** The prevalence of psychiatric symptoms in our sample was 67.1% (n = 302). Depression was the most prevalent symptom (n = 63) and the least was psychosis (n = 5). The prevalence of psychiatric symptoms was highest (26.0%) among women with opiate-dependent spouses (n = 117), and those with hallucinogen-dependent spouses had the lowest prevalence (4.2%). We found a significant relationship between the prevalence of psychiatric disorders and demographic factors including age, women's education, spouse's education, women's job, duration of marriage, number of children, monthly income, and history of psychiatric disorders with the exception of spouses' jobs. ***Conclusions:*** There is a high prevalence of psychiatric symptoms among the wives of men with substance-related disorders and there is need to devise mechanism to reduce the high prevalence of psychiatric disorders

Substance-related disorders are of two types: substance use disorders and substance-induced disorders.[1] Substance-related disorders are one of the most serious psychosocial challenges in contemporary societies.[2,3] The numbers of victims are rising significantly daily,[4] and the relevant complications can endanger individual mental and physical health.[5,6]

Substance-related disorders in Iran are a serious and expanding issue[7–10] with an incidence of 1 in 1000.[11] The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) definition of substance-related disorders is an incompatible pattern of substance use occurring within a 12-month period resulting in severe cognitive, behavioral and physiological distress, or disorders.[11,12]

A new portion of research has sought to study the effects of substance-related disorders on those in direct contact with the affected individual.[12] More than anyone, the wives of men with these disorders are victimized and damaged.[13] Although many family responsibilities are divided between the larger community, immediate family remain an important source of social support[14] with couples providing emotional and physical protection for each other by providing mutual support.[15]

The cause of substance-related disorders are multifactorial.[16,17] Substance-related disorders can have a destructive effect on the spouse and other family members by increasing stress between them.[18] Failure to meet the psychological needs of the spouse can lead to complications such as depression, anxiety, isolation, and insecurity,[15] and cause negative emotions among family members.[19]

While acting as a source of support, personal relationships are also a major source of stress due to arguments between spouses and family violence.[18,20,21] The threat of losing the spouse, unavailability of the spouse, different types of violence, side effects of treatment, and the destruction of the normal daily routine and family roles are among the negative consequences of the effects of substance-related disorders on other family members, especially women.[9,18,20]

Wives of men with substance-related disorders had a higher rate of sexual and physical abuse and

*Corresponding author: ✉m.alikhani18@yahoo.com

mental health problems.[22] These women also had suicidal ideation, attempted suicide, were younger, and had shorter marriages.[23] Also, they may consume substances and may be abused by their substance-addicted spouse. Furthermore, they have high incidences of stress and depression. Several studies have shown that gender (being female), young age, lower education, low socioeconomic status, single or severe loneliness, history of psychiatric disorder in the family, and lack of social support are negative prognosis for the occurrence of mental disorders in women.[12,16,17] The addition of substance-related disorders to marital life doubles wives' problems.[24]

Research on men in Iran with substance-related disorders and its impact on the psychiatric status of other members of the family, especially their wives, can be a valuable contribution to local society.[15,25] Our study sought to evaluate the characteristics and correlates of psychiatric problems in the wives of men with substance-related disorders in Kermanshah, Iran.

METHODS

We conducted a descriptive, analytical study. Our study population included all wives of men with substance-related disorders (who were referred to a substance replacement maintenance treatment center) in Kermanshah, Iran. Substance-related disorders in the husbands were confirmed by thin layer chromatography of urine and an interview (based on DSM-5 criteria). Data were collected between 31 May and 7 December 2016.

We used purposive sampling. Since there is no accurate information on married people with substance-related disorders, the required number of the sample was determined using Cochran's sample size formula with 95% confidence interval and 5% sampling error. This gave a sample size of 385. There were many confounding variables in the study and considering the possibility that some questionnaires would not be answered completely, to increase the external validity, we set a sample size of 450.

Patients were included in the study if (a) their spouse had a definitive diagnosis of substance-related disorder, (b) they could read and write, (c) they were aged 20–55 years old, (d) resided in Kermanshah city, and (e) gave their informed oral consent to participate in the study.

We used the Symptom Checklist-90-Revised (SCL-90-R) as a screening tool to quantify the presence of psychiatric disorders of the study participants. The tool was devised by Derogatis et al in 1973.[26] Having a sixth-grade reading level to respond to the items was sufficient. The time to perform the questionnaire was 12–15 minutes. The tool has nine dimensions and 90 items. The nine dimensions include anxiety, aggression, depression, interpersonal sensitivity, somatization, obsessive-compulsive, phobia, psychosis, and paranoia. Furthermore, there were seven additional items not listed under the nine dimensions mentioned above. The questions were scored using a five-point Likert scale (none = 0, low = 1, moderate = 2, high = 3, very high = 4). In addition to the above nine dimensions, three additional criteria were included in the scale. Scoring and interpreting the scales were performed according to three indexes (i.e., global severity index (GSI), positive symptom distress index (PSDI), and positive symptom total (PST)). Participants with a GSI > 0.7 were considered to have a mental health problem. Those with a GSI between 0.4 and 0.7 were suspected of psychiatric disorder, and people with GSI < 0.4 were considered healthy.[25,27,28] In addition, according to the findings obtained from the previous assessments, those whose GSI was higher than the society average were considered as not having mental health, and those whose GSI was lower were considered healthy.

The questionnaire has previously been assessed for validity and reliability.[29] Furthermore, the results obtained from the reliability calculation in Iran was 97% according to the reset method.[28]

We collected demographic information on each of the participants including age, education, education of spouses, spouse's job, length of marriage (in years), number of children, monthly income (in Iranian rials), history of substance-related disorders in paternal family, history of psychiatric disorders in family, and substance type.

The study was approved by the Kermanshah University of Medical Sciences (KUMS.REC.1395.334). Men with substance-related disorders were asked to attend the center along with their wives. All participants were told about the study objectives and how to complete the questionnaire. They were assured of their anonymity and told they could leave the study at any time. All participants gave their full, informed consent.

We analyzed the data using descriptive statistical methods (mean, standard deviation, frequency, and percentage), correlation coefficient, chi-square test, and logistic regression in compliance with statistical assumptions in theories of regression, recognition of outliers, and avoidance of multilinearity. All analyses were performed by using SPSS Statistics (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp). A *p*-value < 0.050 was considered statistically significant.

RESULTS

The average age of the participants was 39.4±1.8 years. We found a statistically significant relationship between the prevalence of psychiatric disorder symptoms among this group of women and their education level [Table 1]. Women with a low level of education (primary education, secondary education, and diploma) had the highest prevalence of psychiatric disorder symptoms (p = 0.016, χ^2 = 2.73). The prevalence rate of psychiatric disorder symptoms among housewives was higher than that of employed women (with governmental or non-governmental job) (p = 0.003, χ^2 = 1.65). However, there was no relationship seen between the prevalence of psychiatric disorder and the spouse's job (p = 0.741, χ^2 = 2.13).

We observed a significant relationship between the prevalence of psychiatric disorder symptoms among our study group and the spouse's level of education. The prevalence rate of these symptoms among women with low-level educated spouses was higher than those in women with highly educated spouses (p = 0.029, χ^2 = 3.31). We found a statistically significant relationship between the prevalence rate of psychiatric disorder symptoms and the family's monthly income (p = 0.002, χ^2 = 1.51); 46.9% of the subjects were economically at the lower level of society [Table 1].

There was a statistically significant relationship between the prevalence of psychiatric disorder symptoms and duration of marriage (p = 0.007, χ^2 = 2.60) and number of children (p = 0.011, χ^2 = 4.38). The prevalence of psychiatric disorder symptoms among women with negative prognosis (a personal history of Axis I and Axis II psychiatric disorders) was higher than that of the women with no family background (p = 0.004, χ^2 = 0.68). Furthermore, our results revealed a significant

Table 1: Baseline characteristics of the study population (n = 450).

Demographic characteristics	n (%)	χ^2	*p*-value
Age, years			
20–29	51 (11.3)	3.25	0.004
30–39	216 (48.0)		
40–50	183 (40.7)		
Education			
Primary and guidance school	208 (46.2)	2.73	0.016
High school diploma	184 (40.8)		
Bachelor	45 (10.0)		
MA and higher	13 (2.9)		
Education of spouses			
Primary and guidance school	183 (40.7)	3.31	0.029
High school diploma	132 (29.3)		
Bachelor	94 (20.9)		
MA and higher	41 (9.1)		
Occupation			
Housewife	392 (87.1)	1.65	0.003
Government employee	33 (7.3)		
Self-employed	25 (5.6)		
Spouse's job			
Unemployed	36 (8.0)	2.13	0.741
Government employee	128 (28.4)		
Self-employed	286 (63.6)		
Duration of marriage, years			
≤ 5	110 (24.4)	2.60	0.007
6–9	302 (67.1)		
≥ 10	38 (8.4)		
Number of children			
0	12 (2.7)	4.38	0.011
1–2	64 (14.2)		
3–5	348 (77.3)		
> 6	26 (5.8)		
Family income, Iranian rials			
< 10 million	211 (46.9)	1.51	0.002
10–15 million	175 (38.9)		
> 16 million	64 (14.2)		
History of psychiatric disorders Axis I and II			
Yes	106 (23.6)	0.68	0.004
No	344 (76.4)		
Kind of substance			
Stimulants	90 (20.0)	1.11	0.005
Depressants	130 (28.9)		
Hallucinogens	63 (14.0)		
Narcotics	167 (37.1)		

χ^2: chi square; MA: master's degree.

Table 2: Mean standard deviation of nine scales and three indexes of the Symptom Checklist-90-Revised (SCL-90-R) screening tool in wives of men with substance-related disorders.

Psychiatric disorder symptoms SCL-90-R	Mean n = 450	Healthy* n = 156	Psychiatric disease** n = 294
Anxiety	0.6 ± 1.5	0.3 ± 0.6	0.3 ± 0.6
Aggression	0.7 ± 1.0	0.3 ± 0.5	0.3 ± 0.5
Depression	0.7 ± 1.8	0.4 ± 0.7	0.4 ± 0.7
Interpersonal sensitivity	0.7 ± 1.6	0.3 ± 0.6	0.3 ± 0.6
Somatization	0.6 ± 0.9	0.3 ± 0.5	0.3 ± 0.5
Obsession/compulsion	0.6 ± 0.9	0.4 ± 0.5	0.6 ± 1.4
Phobia	0.5 ± 0.6	0.3 ± 0.3	0.6 ± 1.0
Psychosis	0.6 ± 0.7	0.5 ± 0.8	0.7 ± 1.0
Paranoia	0.4 ± 0.8	0.3 ± 0.4	0.5 ± 1.0
GSI	0.2 ± 1.1	0.2 ± 0.6	0.4 ± 1.5
PST	0.7 ± 28.6	5.3 ± 17.2	18.6 ± 45.0
PSDI	0.1 ± 1.7	0.3 ± 1.5	0.4 ± 2.1

GSI: global severity index; PST: positive symptom total; PSDI: positive symptom distress index.
**GSI score less than mean of society under consideration, considered healthy.*
***GSI score higher than mean of society under consideration, considered as having psychiatric disease.*

relationship between the type of substance used by the spouse and the prevalence of psychiatric disorder symptoms ($p = 0.005$, $\varkappa^2 = 1.11$). The prevalence of these symptoms in women with spouses addicted to narcotics (n = 167; 37.1%) was higher than that of the women with spouses using depressants (n = 130; 28.9%), stimulants (n = 90; 20.0%), and hallucinogens (n = 63; 14.0%) [Table 1].

Tables 2 and 3 show the prevalence of symptoms of mental disorders among the wives of men with substance-related disorders. In this group of women, the lowest and highest means relevant to the subscales of psychiatric disorder symptoms included depression (0.7±1.8) and psychosis (0.6±0.7), respectively.

According to the results obtained in this study, if calculation methods mentioned in the study by Dastoury et al,[25] were used, a total of 275 women (61.1%) had a GSI > 0.7 and were considered to lack mental health and as psychiatric patients; 28 women (6.2%) had a GSI between 0.4 and 0.7 and were suspected of having psychiatric disease. One hundred and forty-seven women had a GSI < 0.4 and were considered healthy. However, if the calculation methods given in Dai et al,[27] and Geiser et al,[28] studies were used, the average GSI in 156 women

Table 3: Frequency and percentage of psychiatric problems in wives of men with substance-related disorders (with a GSI cut-off of 0.4 to 0.7).

Psychiatric disorder symptoms in women	Substance used by spouse, n (%)				
	Stimulants	Depressants	Hallucinogens	Narcotics	Total
Anxiety	8 (1.8)	12 (2.7)	4 (0.9)	21 (4.7)	45 (10.0)
Aggression	13 (2.9)	14 (3.1)	2 (0.4)	13 (2.9)	42 (9.3)
Depression	12 (2.7)	20 (4.4)	4 (0.8)	27 (6.0)	63 (14.0)
Interpersonal sensitivity	10 (2.2)	14 (3.1)	1 (0.2)	22 (4.9)	47 (10.4)
Somatization	7 (1.5)	22 (4.9)	2 (0.4)	10 (2.2)	41 (9.1)
Obsession/compulsion	2 (0.4)	11 (2.4)	0 (0.0)	14 (3.1)	27 (6.0)
Phobia	4 (0.8)	6 (1.3)	2 (0.4)	9 (2.0)	21 (4.7)
Psychosis	2 (0.4)	0 (0.0)	3 (0.7)	0 (0.0)	5 (1.1)
Paranoid	9 (2.0)	0 (0.0)	1 (0.2)	1 (0.2)	11 (2.4)
Total	67 (14.9)	99 (22.0)	19 (4.2)	117 (26.0)	302 (67.1)

GSI: global severity index.

Table 4: Correlation coefficient (r) of psychiatric problems in women with spouses' substance-related disorders.

Psychiatric disorder symptoms in women	Substance used by spouse							
	Stimulants		Depressants		Hallucinogens		Narcotics	
	r	*p*-value	r	*p*-value	r	*p*-value	r	*p*-value
Anxiety	0.512	0.006	0.429	0.002	0.564	< 0.001	0.488	0.001
Aggression	0.592	0.003	0.519	< 0.001	0.526	< 0.001	0.538	0.004
Depression	0.464	0.001	0.389	0.001	0.430	0.004	0.362	< 0.001
Interpersonal sensitivity	0.530	0.006	0.502	0.002	0.566	0.002	0.534	0.001
Somatization	0.475	0.002	0.493	0.005	0.441	0.003	0.540	0.003
Obsession/compulsion	0.411	0.005	0.327	0.006	0.541	0.008	0.479	< 0.001
Phobia	0.411	0.001	0.044	0.001	0.425	0.005	0.433	0.003
Psychosis	0.521	0.002	0.435	< 0.001	0.361	< 0.001	0.488	0.001
Paranoid	0.555	0.004	0.378	0.003	0.430	< 0.001	0.455	< 0.001

Table 5: Analysis indexes of final variables entered into the logistic regression equation.

Variables	Regression coefficient	Wald	Odds ratio	95% confidence interval		*p*-value
				Minimum	Maximum	
Age	1.063	3.238	1.462	1.791	3.980	0.018
Education	1.446	2.264	1.357	0.546	3.825	0.012
Job	1.632	2.421	1.990	1.046	3.668	0.033
Duration of marriage	1.123	3.044	1.512	1.021	4.647	0.021
Number of children	1.825	2.318	1.431	1.960	3.732	0.050
Family history of psychiatric disorders	0.149	2.631	1.205	0.964	2.235	< 0.001

were lower than the PST and these women would be considered as probably healthy. But in 294 women, the average GSI were higher than the PST, and these women were considered probable psychiatric patients [Table 2].

The prevalence of psychiatric disorder symptoms (symptom states) in the entire sample was 67.1% (n = 302). Depression was the most prevalent symptom (n = 63; 14.0%) and the least prevalent was psychosis (n = 5; 1.1%). Furthermore, the highest prevalence of psychiatric symptoms was among women with opiate-dependent spouses (n = 117; 26.0%), and women with spouses using hallucinogens (n = 19; 4.2%) had the least prevalence of psychiatric symptoms [Table 3].

The correlation coefficient of psychiatric symptom disorder among women and their spouses' substance are shown in Table 4. The absolute value of the correlation coefficient ranges from 0.044 to 0.592 and were statistically significant in all cases.

To simultaneously assess the entire effects of the variables on the psychiatric symptoms among women with addicted spouses, we fitted a logistic regression model to the data. The most profitable predictor variables related to psychiatric symptoms in the study sample include family history of psychiatric disorders ($p < 0.001$), education ($p = 0.012$), age ($p = 0.018$), duration of marriage ($p = 0.021$), and job ($p = 0.033$). A weak statistical relationship was observed between the number of children and psychiatric disorder symptoms ($p = 0.050$) [Table 5].

DISCUSSION

We sought to evaluate the characteristics and correlates of psychiatric disorders in the wives of men with substance-related disorders in Kermanshah, Iran. In Iran, relevant studies of substance-related disorders have focused on scattered estimates including the prevalence, kind of substances used, attitude towards substance use and predictor factors, risky or protective factors, lack of life skills among the people at risk of substance-related disorders, and testing psychological interventions compared with medical treatment. No study has assessed the impact on women who bear the burden of living

with addicts. Our study of the wives (aged 20–50 years) of men with substance-related disorders in Kermanshah provides an accurate estimate of the present situation.

The prevalence of psychiatric symptoms among the wives of men with substance-related disorders as a non-clinical population is remarkable. The GSI of 275 women (61.1%) in this study was higher than 0.7, suggesting that they lack mental health and are regarded as psychiatric patients. The GSI of 28 women was between 0.4 and 0.7, and these women were suspected of psychiatric disease. The GSI of 147 women (32.7%) was lower than 0.4 and they were considered healthy. The prevalence of psychiatric symptoms in the entire sample was 67.1% (n=302). The most prevalent symptom was depression (n = 63; 14.0%) with an average score of 0.7±1.8, and the least prevalent was psychosis (n = 5, 1.1%) with an average score of 0.6±0.7. Our results are consistent with previous studies.[22,29–31]

A previous study of 131 women married for at least two years revealed a significant relationship between the substance-related disorders of their spouse and anxiety, depression, suicidal ideation, and suicide attempts. Furthermore, there was a statistically significant relationship between high score in psychological factors among women and physical violence by their spouses.[22]

However, a study that directly analyzes the psychological status in this specific group of women is missing from the literature. Substance use as a disorder has different outcomes not only for the health and welfare of the affected person, but also the welfare of family, friends, and society.[18,31] Trauma of this condition is most pronounced when the wives become aware of their spouse's substance-related disorders. Women with addicted spouses have higher rates of depression. Generally, women (teenage and adult) have the higher rate of depression.[32,33] Some argue that it is caused by women's biological and hormonal differences, and some refer to personality, social, and cultural factors.[33] Different researchers suggest that mental rumination is associated with mood disorders, and mental rumination in women is higher than that in men.[32] Furthermore, destructive interpersonal relationships can cause side effects such as blaming yourself and others, self-pity, fear, depression, anxiety, isolation, and insecurity.[16] On the other hand, those with substance-related disorders pay more attention to drug or alcohol than other family members. This causes negative emotions among the family members.[16]

The results of our study are in line with previous studies.[34–37] The most prevalent symptoms of psychiatric disorders were among women with opiate-dependent spouses and the least prevalent in women with hallucinogen-addicted spouses. Illangasekare et al,[30] showed that the more women enjoy social support, the less they have depression. Furthermore, there is a significant relationship between lack of social support and mental disorder.[37]

Other findings suggest a significant relationship between the prevalence of psychiatric disorder symptoms and a low level of education (primary education, secondary education, and diploma) in both women and their spouse. Another study also showed a significant relationship between a low level of education and social and psychological problems in this group of women.[22,38] Our study is in line with the results from previous findings,[37–40] suggesting that the prevalence rate of psychiatric disorder symptoms among housewives is higher than that of employed women (with governmental or non-governmental job); but there is no relationship with the spouses' job. Studies show that the feeling of self-worth, competence, independence, sufficient income, and sense of security are essential factors for mental health and are ignored for many women. Such women experience physical and mental violence by their spouses.[32,41] All of these problems can increase psychiatric problems in this group of women. Since most women are less physically active than men, low physical activity and mental rumination are important factors leading to many psychiatric problems in women. As preoccupation reduces mental rumination, housewives are more likely to be entrapped in mental rumination than people working outside of the home.

We found a significant relationship between the prevalence of psychiatric disorder symptoms and duration of marriage and number of children. The prevalence of psychiatric disorder symptoms in women with negative prognosis (personal history of Axis I and Axis II psychiatric disorders) was higher than that of the women without a family history of psychiatric disease. Other studies have shown a significant relationship between spouses' substance-related disorder, low family income, and high-stress levels in women.[30,39] Spouses' substance-

related disorders, higher age, shorter duration of marriage, and low education level are predictors of depression. Furthermore, our results that are in line with previous studies showing a significant relationship between the kind of substance used and the prevalence of psychiatric disorder symptoms. We found a relationship between substance profile (heroin, cocaine, alcohol, and benzodiazepines) and social performance disorder, medical infections, and disorders of impulse control. Furthermore, there is a relationship between this substance profile (alcohol, cannabis/cocaine) and the cognitive aspect of disorder and mental disorder.[35]

Considering the relatively high prevalence of psychiatric disorders (67.1%) in our subject group and the importance of good mental health among women as future educators of the country, it is necessary that the responsible authorities identify, treat, and prevent at-risk women.

The burden of psychiatric disorders in developed countries has been recognized to a large extent by screening questionnaires and standard clinical interviews. Studies assessing the burden of psychiatric disorders in Iran, especially within the families with substance-related disorders and other stressful factors, are limited. Planning to provide this group of people with necessary services of mental health requires an awareness of the current condition of mental illness in the community.

We used a questionnaire with a self-report aspect, which gives rise to the potential for subject's responses to be colored by bias and distortion due to unconscious defense, bias in response, and personal introduction methods. Furthermore, we used purposive, non-random sampling and the results of our study are related to the wives of men with substance-related disorders only. Since expressing or hiding many emotional and behavioral problems is related to social and cultural values, generalization of findings to other cultures and all women who live with chronic patients is limited. Accordingly, we should be cautious about this matter. Furthermore, it is suggested to perform this study at a broader level and in different cities.

CONCLUSION

There is a high prevalence of psychiatric symptoms among the wives of men with substance-related disorders and a need to identify, treat, and handle psychiatric issues in this group of women. Our findings suggest a need for counseling centers with the duty to protect these women.

Disclosure

The authors declared no conflicts of interest. This study received financial fund from Substance Abuse Prevention Research Center, Kermanshah University of Medical Sciences (Grant number: 95650).

Acknowledgements

The authors would like to thank the Substance Abuse Prevention Research Center and Clinical Research Development Unit of Imam Khomeini Hospital, University of Medical Sciences, Kermanshah, Iran for their support, cooperation, and assistance throughout the period of study.

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