Original Article

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Psychiatry Section

Study of Association of Substance Use Disorders with Family Members' Psychological Disorders

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ABSTRACT

Introduction: Substance Use Disorders (SUDs) represents a serious problem in Iranian community that may lead to psychological disorders in families.

Aim: This study was conducted to investigate the association of SUDs with family members' psychological disorders.

Materials and Methods: The sample size of the study consisted of 724 people referred to a counseling and psychology clinic in Shahrekord, southwest Iran. For data gathering, random method was adopted. After the relationship was established with the patients during the counseling and their confidence was gained, development of SUDs and related effect on the referred patient's family members were investigated by a pre-developed checklist. The statistical tests used to analyse the data were chi-square, Fisher's exact test, and odds ratio.

Results: The most frequent disorder noted was depression (40.5%) followed by generalized anxiety disorder (21%), minor interpersonal and children's behavioural problems (15%), and hysteria (8%). Depression, hysteria, and minor interpersonal and children's behavioural problems in the women and men were reported 48% vs. 20%, 9% vs. 5%, and 10% vs. 27%, respectively. A significant association was seen between SUDs in the patients' spouses and children as well as in their families, and gender, marital status, and occupation, but not place of residence and education.

Conclusion: An association was seen between the psychiatric disorders in the people referring the studied center and SUDs in their families. Addiction in family plays an important role in developing or recurring psychiatric disorders in other family members.

Keywords: Anxiety disorder, Depression, Psychiatric disorder

INTRODUCTION

Worldwide, SUDs represents a health problem with major individual, economic, biological, pharmacological, social, and psychological consequences. Iran is a country more seriously engaged with this problem because of its geopolitical location (being located next to the Golden Crescent) [1,2]. This problem involves not only the addicts but also their families, and is associated with a variety of complications, particularly psychological disorders, for both the abusers and the people who are somehow related to them [3].

The first institute affected by SUDs is family. Studies have less frequently addressed the SUDs effect on development or recurrence of psychological disorders in the family members [4]. The effects of SUDs frequently extend beyond the immediate family. Family members may experience feelings of concern, anger, anxiety, fear, embarrassment and abandonment that can interact with each other; hence, it seems necessary to conduct psychological needs assessments and conduct appropriate interventions on patients with SUDs [5,6]. Chronic diseases affect the quality of life [7-9]. Because SUDs lead to many adverse effects in both the patients and their family members, it may contribute to development and recurrence of psychological disorders (rather than addiction) [10].

In the culture of psychology, SUDs are maladaptive patterns of use of drugs due to which the patient uses drugs inappropriately, leading to serious emotional, cognitive, and behavioural damage in workplace, school, and home [11]. This pattern clinically causes turbulence and serious damage in the abusers, and is manifested by drug tolerance and withdrawal syndrome [12]. The family members of people with SUDs are likely to present higher levels of damage, particularly SUDs [13]. SUDs in fathers may cause some problems for male children, which could be manifested internally or externally [14]. In addition, the children are at higher risk in the families with parents abusing alcohol, opium, and heroine than the families with parents without SUDs [15,16]. Because SUDs lead to many adverse effects in both the patients and their family members, it may contribute to development and recurrence of psychological disorders (rather than addiction) [10], the present study is to investigate the association of SUDs with family members' psychological disorders.

MATERIALS AND METHODS

This descriptive analytical study was conducted within one year after the necessary approvals were obtained from the Research and Technology Deputy of the Shahrekord University of Medical Sciences, Shahrekord, Iran. In view of the previous studies [17,18] and the formula of sample size calculation, the required sample size for the present study was determined 724 people. The participants were selected from the patients referred to the Counseling and Psychology Clinic of Ayatollah Kashani Hospital, Shahrekord, southwest Iran for counseling and psychotherapy by oneself, a psychiatrist, neurologist, or pediatrician to a clinical psychologist within 12 months. Of these patients, 358 people reported to have at least one family member with SUDs. The inclusion criteria were having psychiatric disorder according to clinical interview and DSM-5 criteria (Diagnostic and Statistical Manual of Mental Disorders, fifth edition), having appropriate mental and physical conditions at the time of interview, volunteering to complete the questionnaire and participate in the study, and being able to communicate well. The exclusion criteria were having organic brain disorders and SUDs and not volunteering to participate in the study. All samples of the study had psychiatric disorders in addition to SUDs.

For data gathering, random method was adopted. At first, the samples of the study were numbered and the numbers were recorded on small similar cards. Then, we poured all cards into a box and after shaking the box each time, took a card randomly

out of the box and registered its number. This process continued until the desired number of samples was achieved. To obtain the patients' consent to participate in the study, after explaining the research purposes to them, we asked the patients to fill out the form of consent for participation in the study. Moreover, the patients were ensured that the research data are kept private and used only for the research purposes.

The only information about the patients' family members gathered from the patients themselves, using the checklist and clinical interviews, was concerned with other family members' potential engagement with SUDs. Such information was gathered within two 45-60 minutes sessions which were independent of counseling and psychotherapy sessions. Counseling sessions were two 45-60 minutes group sessions and eight 45-60 minutes individual sessions. The instrument used in the present study was a checklist of symptoms of psychiatric disorders developed according to DSM-5 [6,19].

Obviously, since the majority of the patients were referred by a psychiatrist, the diagnosis was definite. However, some of the patients referred by other subspecialists or themselves were diagnosed by the checklist and clinical interview, and then were referred to psychiatrist to be further examined so that the initial diagnosis could be confirmed. The study protocol was as follows: After the relationship was established with the patients throughout counseling process (which might take several sessions) and the confidence of the patients was gained, development of SUDs and related effect on the referred people's family members were investigated by a predeveloped checklist. The data were analysed by chi-square, Fisher's exact test, and odds ratio.

RESULTS

Out of total referring people (n: 724), 358 (49.4%) reported that at least one of their family members had SUDs and the remaining reported that none of their family members had SUDs, of whom 88.8% were female and 95.9% married, 62.4% lived in rural areas, 48.7% had elementary and secondary education completion certificate, and 69.5% were housewives. Of the patients who reported to have family members with SUDs, 54.7% were male and 98.1% single, 54% lived in rural areas, 47.2% had elementary and secondary education completion certificate, and 46.7% were housewives.

The most frequently used substance was opium followed by crack, glass, and cannabis.

The results indicated significant association of SUDs in spouse and children, and family with gender, marital status, and occupation ($p<0.05$) [Table/Fig-1]. In the patients reporting SUDs of their spouse and children, and in the family, the most frequent disorder was depression (40.5%) followed by generalized anxiety disorder (21%), minor interpersonal problems and children's behavioural problems (15%), and hysteria (8%). Depression, hysteria, and minor interpersonal problems and children's behavioural problems were reported 48% vs. 20%, 9% vs. 5%, and 10% vs. 27% in women and men, respectively.

Furthermore, an individual with depression was 1.9% (approximately two) times more likely than those with other psychological disorders to have spouse or children with SUDs. An individual with anxiety was 0.45 times, adjustment disorder 1.8 times, hysteria 2.7 times, and minor interpersonal problems and children's behavioural problems 0.4 times more likely to have spouse or children with SUDs, all of which showed a significant association with SUDs of spouse and children and in the family. The odds ratio was derived 1.3, 0.4, 0.47, and 1.8 for Obsessive-Compulsive Disorder (OCD), social fear, sleep disorders, and sexual dysfunction, respectively, with no statistically significant association [Table/Fig-2]. As [Table/Fig-2] indicates, the patients with depression were 1.97% times more likely to have spouse or children with SUDs than those with other psychological disorders.

The odds ratios of generalized anxiety disorder, adjustment disorder, hysteria, and minor interpersonal problems and children's behavioural problems separately were significantly higher than other disorders, but for other disorders (OCD, social fear, sleep disorders, and sexual dysfunction), the difference was not statistically significant although odds ratio was obtained higher than other disorders.

DISCUSSION

In this study, most of the participants were housewives (women), which could be explained by higher referring of women than men and more prevalence of psychiatric disorders in housewives than the employed women. Kuntsche S et al., study showed that mothers with a partner who were in paid labor reported consuming more

Variable		Patients with SUD		Patients without SUD		
		Frequency	%	Frequency	%	
Sex	Male	88	54.7	175	88.8	p≤0.001
	Female	73	45.3	22	11.2	
Marital status	Single	158	98.1	-	-	p≤0.001
	Married	-	-	189	95.9	
	Others	3	1.9	8	4.1	
Place of residence	Urban	74	46	74	37.6	p=0.108
	Rural	87	54	123	62.4	
Education level	Illiterate	22	13.7	36	18.3	p=0.495
	Elementary and secondary	76	47.2	96	48.7	
	High school and above	41	25.5	45	22.8	
	BA/BSc and above	22	13.7	20	10.2	
Occupation status	Unemployed	31	20.4	29	14.7	p≤0.001
	Housewives	71	46.7	137	69.5	
	Civil servant	13	8.6	13	6.6	
	Worker	24	15.8	10	5.1	
	Self employed	13	8.6	8	4.1	

[Table/Fig-1]: Association between demographic variables and previous substance use disorders in patients' spouses and children and in their families.

Psychological disorder	Patient's family		Patient's spouse and children		Odds ratio	95% confidence interval
	Frequency	%	Frequency	%		
Depression	51	31.7	94	47.7	1.97*	(1.28, 3.04)
Obsessive-compulsive disorder (OCD)	7	4.3	11	5.6	1.30	(0.49, 3.44)
General anxiety disorder	45	28	29	14.7	0.45*	(0.26, 0.75)
Social phobia	6	3.7	3	1.5	0.40	(0.10, 1.62)
Adjustment disorder	0	0	5	2.5	1.84*	(1.67, 2.02)
Hysteria	7	4.3	22	11.2	2.77*	(1.15, 6.65)
Sleep disorders	10	6.2	6	3	0.47	(0.17, 1.34)
Sexual dysfunction	0	0	8	4.1	1.85	(1.68, 2.04)
Minor interpersonal problems and children's behavioural problems **	35	21.7	19	9.6	0.38*	(0.21, 0.70)

[Table/Fig-2]: Odds ratio of psychological disorders and previous substance use disorders in studied people.
* Odds ratio is statistically significant (p<0.05).
** Minor problems that need no intervention and some behavioural problems in children such as pertinacity and aggression

alcohol on drinking days than partnered housewives. In countries with high gender–income equity, mothers with a partner who are in paid labor have been reported to drink less alcohol per occasion, while alcohol use was higher among working partnered mothers living in countries with lower gender-income equity [20]. In countries that facilitate working for mothers, daily alcohol use decreases as female social roles increase; in contrast, in countries where there are fewer incentives for mothers to remain in work, the protective effect of being a working mother (with partner) on alcohol use is weaker. These data suggest that a country's measures to improve the compatibility of motherhood and paid labor may reduce alcohol abuse and SUDs among women.

Liddle HA et al., study demonstrated a significant association between SUDs by spouse and children and in the family with gender, so that the women reported such problem significantly more frequently than the men did. For marital status, 96% of the married people and 98% of the single reported to have such problem in their families with a significant difference [21]. This finding could also be explained by the fact that the single people have no spouse and children and therefore, reported this problem in their families. For occupation, there was a significant association between the occupation and the patients' reporting SUDs of spouse and children and in the family, so that housewives reported the problem {affecting their spouse and children (69.5%) and family (47%)} most frequently. This significant association could be attributed to the high number of housewives in this study.

This study also indicated that 40.5% of the reporting patients had depression, 21% generalized anxiety disorder, 15% minor interpersonal problems and children's behavioural problems, i.e., minor problems that need no intervention and some behavioural problems in children such as pertinacity and aggression, and 8% hysteria. The results of a study showed that people with SUDs experienced problems with different severities in psychological, social and behavioural areas, and due to their low self esteem and inappropriate self image, the study participants continued to experience fear and anxiety [6].

Of the patients with depression, 107 reported to have spouse and children with SUDs and 38 reported this problem in their families, most of whom were women, which is consistent with previous studies that have reported a higher prevalence of depression in women than men [22].

Moreover, a person with depression was 1.9% (approximately two) times more likely than those with other psychological disorders to have spouse or children with SUDs with a significant difference [6,23-25]. Regarding psychiatric disorders, the individuals with anxiety, hysteria, adjustment disorder, and minor interpersonal problems and children's behavioural problems were 0.45, 2.8, 1.8, and 0.4 times, respectively, more likely to have spouse, children, and family with SUDs than those with other psychiatric disorders with a significant difference. This represents a significant association between SUDs in spouse, children, and family and psychiatric disorders. These findings are consistent with other studies [24,26]. Inconsistent with this study's results, Biederman J et al., found no association between parental SUDs and behavioural inhibition in offspring [27]. These negative findings are inconsistent with many studies that have reported association between behavioural inhibition and parental disorder, depression, hysteria, and adjustment disorder. It may reflect aetiologic heterogeneity, because it is likely that some forms of depression and hysteria are associated with SUDs and others with behavioural inhibition.

A study indicated that a patient with OCD was 1.3 times more likely to have spouse, children or family with SUDs than a patient with other psychiatric disorders. The odds ratio was derived 0.4, 0.47, and 1.8 for social fear, sleep disorders, and sexual dysfunction, respectively, which were insignificantly higher than other disorders [28].

Taken together, the results of this study showed that there was an association between the psychiatric disorders in the people referring to the studied center and SUDs in their families. Moreover, the addiction in family plays an important role in developing or recurring psychiatric disorders in other family members.

LIMITATION

A limitation of the present study was that the duration of study was one year that made gathering of the data challenging. Moreover, substance abuse is considered illegal in Iran, which may make some of the participants avoid reporting this issue.

CONCLUSION

Substance abuse can affect family interactions and lead to psychiatric disorders among family members. Family based models are not only a viable treatment of choice for the treatment of SUDs, but are consistently being recognized as one of the most effective approaches to treat both adults and adolescents with SUDs.

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