Original Article

Prevalence of Domestic Violence Against Women Undergoing Methadone Maintenance Therapy Programs and its Related Risk Factors

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Abstract

Background: This study aimed to investigate the prevalence of domestic violence (DV) against women who are undergoing methadone maintenance therapy (MMT) and its related risk factors.

Methods: This case-control study was conducted on 195 women who were under MMT and a control group consisting of 195 women who were not under it in the city of Zahedan from 22 May to 1 December 2019. Data were collected using a questionnaire for the measurement of violence against women and a sociodemographic questionnaire. In order to analyze the data, the *t* test, analysis of variance (ANOVA), Pearson's correlation, and multiple regression analysis were used.

Findings: In the case group, 67.2% of participants had experienced DV during the past year. In the control group, the prevalence was 78.5%. The rate of more than one occasion of DV was significantly higher in the group who were under MMT (*P* < 0.05). The most common type of violence was mental abuse. Physical, sexual, and economic abuses were in the next ranks. Important predictors of DV, in order of importance, were: the women's low educational level, smoking, income level, and polygamy (*P* < 0.05).

Conclusion: MMT is not a risk factor for DV. It seems that the rate of DV against women in Zahedan is very high. The prevalence of recurrent DV in women under MMT was higher than in the general population.

Keywords: Domestic violence, Women, Addiction, Methadone treatment therapy, Risk factors

Introduction

Violence is an important public health issue. It is a problem beyond regional borders that is gradually increasing in the world.[1,2] Domestic violence (DV) is the deliberate use or threatening to use of physical force or power to control or harm a person in various types such as mental, social, physical, sexual, and economic.[3,4] Usually, women and girls are the prime victims of DV. In most cases, DV is exerted by an intimate partner, and men are usually the main agent.[5]

There are several types of DV. Mental abuse is any behavior that makes another person feel unhappy, miserable, humiliated, afraid, or worthless.[6] Physical abuse is the use of physical force and power against a person including beatings, kicking, pushing, or preventing someone from accessing adequate food and health facilities.[7] Sexual abuse is forcing or coercing a person to have sexual contact or sexual behavior without consent or having sex with a person without informing him/her, which it can cause sexually transmitted diseases.[8] Economical abuse is keeping a person away from financial resources or threatening him/her to cut resources so that he/she cannot access his/her needs and interests or limiting access to them.[5] DV influences all aspects and functions of the person. Also, it has social, mental, and economical side effects.[9]

DV usually occurs against women (90%), 2% to 3% of cases are against men, and 7% to 8% of cases are mutual.[9] The prevalence of DV is different in various regions of the world. The prevalence of DV is estimated to be 18% to 64% for women in developing countries and 28% for women in developed countries.[2] The prevalence of DV in 28 provinces of Iran was reported 86.6%, which is physical (28.7%), emotional (90.6%), and sexual (42.4%).[10]

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DV is related to various factors such as poverty,[11] addiction to substance and alcohol,[10] mental disorders,[12] female gender,[13] social level, economic condition,[14] low educational level, rental house, and unemployment of husband.[10]

Methadone, a derivative of diphenylmethanes (Hepatamines), is a long-acting opioid agonist. Using methadone as a substitute for heroin is a major strategy for treating drug users. However, Methadone consumption can cause side effects such as sexual problems, drowsiness, fainting, and weakness.[15-17]

Previous studies have shown that DV against women is related to the history of substance abuse,[18] smoking and hookah use, employment,[19] and the educational level of women.[18] Other characteristics such as being in a polygamous marriage,[20] low income,[21] and large family size[22] were also related to DV. However, to the best of our knowledge, there is no study on DV against women under MMT. Women under treatment of addiction are at much higher risk of violence and abuse in comparison to women in the general population because they do not have enough resources and usually, they have risk factors of DV like low education and being jobless.

Due to the higher rates of substance abuse, low employment rate, higher prevalence of polygamy, low income, large family size, and low education in Zahedan, it seems that the rate of DV is higher in this city. To the best of our knowledge, there is no study in this regard. Therefore, this study aimed to investigate the prevalence of DV and its related risk factors in women undergoing methadone maintenance therapy (MMT) programs compared to healthy women living in Zahedan.

Methods
Participants
This case-control observational study was conducted in Zahedan from May 22 to December 1, 2019. The study population was women of Zahedan city. The case group was selected from women undergoing MMT programs in Zahedan. Controls were selected from women who attended health care centers in Zahedan. The inclusion criteria were being married, living in Zahedan, Iranian citizenship, not being pregnant, and not having a chronic mental disorder. The exclusion criterion was no consent for participation in the research. The study purposes were explained to the participants. In the MMT group, all women with inclusion criteria were entered with census sampling. The controls were selected from the nearest health center by matching the age.

First, a complete list of active methadone maintenance treatment centers in Zahedan was prepared in 2019. Then, using random cluster sampling, 9 regions and 9 centers were randomly assigned (one center from each region). Afterwards, subjects from each center were selected by the convenience sampling method. Finally, by excluding invalid data, the data of 195 subjects were analyzed. In the control group, 210 subjects that attended Zahedan health care centers were selected using convenience sampling. With excluding invalid data, the data for 195 subjects remained.

Data collection instruments
A questionnaire for measuring violence against women developed by Saadati[23] was used. The questionnaire has 32 items that are scored based on a 3-point Likert scale: Never = 1, one time = 2, two and more = 3 (recurrent violence). This instrument includes 4 dimensions including mental/verbal (items: 1-16), physical (items: 17-27), sexual (items: 28-30), and economic (items: 31-32). This tool measures the experience of DV during the past year. The internal consistency of the scale was estimated by Cronbach's alpha for sub-dimensions, which were 0.71, 0.86, 0.93, and 0.92, for mental/verbal, physical, sexual, and economic dimensions, respectively. The general reliability was calculated as 0.97, thus, the reliability was confirmed.[23] The reliability in the present study was 0.87.

The sociodemographic information form was created by the research team based on the research variables. The items were age, ethnicity, number of husband's wife, marriage years, family size, educational level, occupation, income, previous history of substance use, duration of substance use, smoking, and hookah.

Statistical analyses
Descriptive data were summarized as Mean ± standard deviation (SD) and frequency distributions. The two groups' means were compared using an independent sample t-test. Quantitative variables among several groups were compared using one-way analysis of variance (ANOVA) (≥ 3). Pearson's correlation test was employed for testing the correlation between quantitative variables. Multiple linear regression analysis with a stepwise variable selection also was fitted to assess the effect of several predictors on response.

Results
The mean age of the case and control groups were 37.82 ± 9.51 and 37.32 ± 8.72 years, respectively ($P > 0.05$). Demographic data are summarized in Table 1.

According to Table 2, in the case group, 131 participants (67.2%) once, and 56 participants (28.7%) twice or more had experienced DV. Also, in the control group, 153 participants (78.5%) once and 27 participants (13.8%) twice or more had experienced DV. There were statistically significant differences between the two groups ($P < 0.05$). The most common DV in the study was mental abuse, followed by physical, sexual, and economic abuse, respectively, there were significant differences in all types of DV between two groups ($P < 0.05$), except

Table 1. Demographic characteristics of case and control group

Variables	Group		P value
	Case	Control	
Age (year), mean ± SD	37.82 ± 9.515	37.32 ± 8.722	<0.001[a]
Education, mean ± SD	8.74 ± 5.135	13.32 ± 5.426	<0.001[a]
Income, n (%)			<0.001[b]
<10 million Rials	69 (35.4)	40 (20.5)	
10-30 million Rials	92 (47.2)	97 (49.7)	
>30 million Rials	34 (17.4)	58 (29.7)	
Substance type			
Opium	121	-	
Crystal	25	-	
Others	49	-	
Smoking, n (%)			<0.001[c]
Yes	71 (36.4)	26 (13.3)	
No	124 (63.5)	169 (86.6)	
Hookah use, n (%)			<0.001[c]
Yes	56 (28.7)	20 (10.2)	
No	139 (71.2)	175 (89.7)	
Family size, n (%)			0.0624[c]
≥6	35 (1879)	22 (11.2)	
<6	160 (82)	173 (88.7)	
Multi wives			<0.001[c]
Monogamy, n (%)	44 (22.5)	9 (4.6)	
Polygamy, n (%)	151 (77.4)	186 (95.3)	

[a] T-test; [b] ANOVA; [c] Chi-square.

Table 2. Prevalence of domestic violence (DV) in the case and control groups

Violence	Case Group			Control Group			P value
	n	%	95% CI	n	%	95% CI	
General DV							
DV (once)	131	67.2	60.6-73.7	153	78.5	72.7-84.2	<0.001
DV (twice or more)	56	28.7	22.3-35	27	13.8	8.9-18.6	<0.001
Subscales							
Mental	181	93.3	89.7-96.8	178	91.3	87.3-95.2	>0.05
Physical	145	74.4	68.2-80.5	86	44.6	37.6-51.5	<0.001
Sexual	134	69.2	69.7-75.6	72	37.4	30.6-44.1	<0.001
Economic	104	53.8	46.8-60.7	62	31.8	25.2-38.3	<0.001

mental abuse (P > 0.05).

According to Table 3, there was a significant statistical difference between all types of DV in the case and control groups (P < 0.05). There was no relationship between DV and type of substance use in the case group (P > 0.05). There was a significant difference between all types of DV in smokers and non-smokers in the two groups (P < 0.05), except sexual abuse in the case group (P > 0.05). There was a significant difference between all types of DV in hookah users and non-users in the two groups (P < 0.05). There was no significant difference between all types of DV in

families with 6 members and families with more than 6 members in the two groups (P > 0.05), except general DV and mental abuse in the control group (P < 0.05). There was a significant difference between all types of DV in monogamy and polygamy in the case group (P < 0.05), except physical abuse and sexual abuse (P > 0.05). Also, there was a significant difference only between economic abuse in monogamy and polygamy in the control group (P < 0.05).

According to the Pearson's correlation results, there was no significant correlation between duration of substance use and DV (r = 0.02), mental (r = 0.07), physical (r = 0.15), sexual (r = -0.17), and economic abuse (r = -0.04) (P > 0.05). But there was a significant correlation between women educational level and DV (r = -0.32), mental (r = -0.29), physical (r = -0.30), sexual (r = -0.23), and economic abuse (r = -0.26) in the case group. Also, there was a significant correlation between women educational level and DV (r = -0.37), mental (r = -0.38), physical (r = -0.28), sexual (r = -0.28), and economic abuse (r = -0.015) in the control group (P < 0.05).

Multiple linear regression analysis was employed to determine the statistically effective factors on DV. A significant regression equation was found (F(6, 383) = 22.175, P < 0.001), with an R^2 of 0.258 (Table 4).

The findings indicated that women's education, smoking, income, and polygamy predicted 24.6% of DV variation. But, group (case and control) was not a significant predictor. The regression model was predicted as DV, 59.659 – 0.842 (education) + 9.020 (smoker) – 5.260 (income 0) – 7.647 (income 1) + 5.085 (polygamy), where education is measured by years, smoking is coded as 0 = smoker and 1 = non-smoker, income is coded as 0 = <10, 1 = 10-30, 2 = >30 million Rial, polygamy is coded as 0 = Monogamy and 1 = Polygamy, and group is coded as 0 = case and 1 = control. DV decreases 0.842 for each increase in education year, and in smokers, it was 9.020 times higher than that in non-smokers. DV in people with an income of <10 million Rial was 5.260%, in people with an income between 10 and 30 million Rial was 7.647%, and in those with an income of >30 million Rial, it was 6.23%. DV in polygamy was 5.085% more than monogamy. Therefore, education years, smoking, income, and polygamy were significant predictors of DV.

Discussion
To the best of our knowledge, this study is the first one that assessed the prevalence of DV against women undergoing MMT programs and compared it with female methadone non-users in Zahedan. The prevalence of DV and its type was reported. The results of the present study showed while DV against women was highly prevalent in Zahedan, the rate of recurrent DV was higher in women under MMT. The most common DV in the study was mental abuse, followed by physical, sexual, and economic

Table 3. Comparison of variables between subgroups

Variables		DV	Mental abuse	Physical abuse	Sexual abuse	Economic abuse
		Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD
Case		54.40±17.84	28.26±9.94	17.16±6.62	5.53±2.19	3.43±1.60
Control		46.68±15.14	25.69±8.78	13.80±5.19	4.44±2.18	2.74±1.29
P value		0.001	0.001	0.001	0.001	0.001
	Substance type					
	Opium	50.57±16.15	26.19±9.13	15.99±5.86	5.30±2.17	3.09±1.43
	Crystal	56.52±2.55	29±10.19	18.28±7.93	5.88±2.33	3.36±1.65
	P value	0.307	0.074	0.172	0.517	0.106
	Smoking					
	Yes	50.73±17.32	26.09±9.45	16±6.44	5.47±2.23	3.16±1.47
	No	60.80±17.03	32.05±9.69	19.19±6.48	5.64±2.12	3.90±1.72
	P value	0.001	0.001	0.001	0.599	0.003
	Hookah use					
	Yes	50.69±16.10	26.09±8.97	16.04±5.89	5.32±2.19	3.23±1.54
	No	63.58±18.76	33.66±10.25	19.94±7.15	6.07±2.12	3.91±1.66
	P value	0.001	0.001	0.001	0.031	0.008
Case Group	**Family size**					
	≥6	54.59±17.88	28.27±6.96	17.33±6.63	5.60±2.15	3.37±1.55
	<6	53.51±17.91	28.22±9.98	16.37±6.61	5.22±2.37	3.68±1.81
	P-value	0.747	0.980	0.436	0.357	0.351
	Multi wives					
	Monogamy	52.80±17.27	27.31±9.68	16.73±6.41	5.50±2.16	3.25±1.52
	Polygamy	59.88±18.88	31.54±10.22	18.63±7.16	5.65±2.31	4.04±1.72
	P-value	0.020	0.013	0.094	0.679	0.004
	Income*					
	<10	60.86±18.65	31.92±10.33	18.82±7.32	6.42±2.12	3.69±1.63
	10-30	50.69±15.86	26.30±8.99	16.19±5.67	4.90±2.01	3.29±1.50
	>30	51.29±18.03	26.14±9.74	16.41±7.03	5.47±2.23	3.26±1.78
	P value	0.001	0.001	0.033	0.033	0.234
	Substance type					
	Opium	45.07±13.96	24.80±8.32	13.36±4.69	4.25±2.05	2.65±1.22
	Crystal	57.15±18.35	31.50±9.68	16.65±7.16	5.65±2.65	3.34±1.59
	P value	0.001	0.001	0.031	0.015	0.042
	Smoking					
	Yes	44.51±13.25	24.53±7.99	13.04±4.22	4.29±2.10	2.64±1.21
	No	65.65±17.58	35.90±9	20.45±7.74	5.70±2.15	3.6.±1.66
	P value	0.001	0.001	0.001	0.025	0.021
	Hookah use					
	Yes	45.46±14.60	24.83±8.25	13.57±5.12	4.35±2.16	2.69±1.27
	No	56.27±16.16	32.45±10.07	15.59±5.54	5.09±2.34	3.13±1.45
	P value	0.001	0.002	0.086	0.140	0.132
Control Group	**Family size**					
	≥6	46.29±14.97	25.52±8.71	13.66±5.11	4.41±2.19	2.68±1.26
	<6	54.77±17.22	29.33±10.09	16.66±6.40	4.88±2.26	3.88±1.61
	P value	0.101	0.205	0.090	0.531	0.006
	Multiple wives					
	Monogamy	46.29±14.97	25.52±8.71	13.66±5.11	4.41±2.19	2.68±1.26
	Polygamy	54.77±17.22	29.33±10.09	16.66±6.40	4.88±2.26	3.88±1.61
	P value	0.101	0.205	0.090	0.531	0.006
	Income*					
	<10	55.40±15.22	30.85±8.74	16.00±5.51	5.42±2.60	3.12±1.43
	10-30	43.60±12.59	24.14±7.88	12.70±3.87	4.20±2.06	2.55±1.17
	>30	45.81±16.87	24.74±9.07	14.12±6.34	4.15±1.90	2.79±1.36
	P value	0.001	0.001	0.003	0.006	0.062

*income is in million Rial

Table 4. Results of regression analysis to predict domestic violence by sociodemographic variables

Predictive Variable			B	SE	Beta	t	P value
Constant			59.659	3.534		16.034	<0.001
Education (year)			-0.842	0.167	-0.255	-5.039	<0.001
Smoking			9.020	1.816	.230	4.968	<0.001
Income (million Rials)	0	<10	-5.260	2.289	-0.132	-2.297	
	1	10-30	-7.647	1.871	-0.225	-4.088	0.022
	2	>30					
Polygamy			5.085	2.271	0.103	2.240	0.026
Group	0		1.294	1.649	0.038	0.785	0.433
	1						

Adjusted $R^2 = 0.246$, $R^2 = 0.258$, $R = 0.508$

abuse, respectively, which is consistent with the results of other studies.[18]

The results of the study showed that smoking and hookah by women were related to DV, which is similar to the results of previous studies.[24,25] Probably, the main reason for smoking in this group is psychological stress and the belief that smoking reduces stress. Smoking reduces immediate stressful feelings by activating the mesolimbic dopaminergic system and temporary distraction. Also, studies have shown that tobacco use is associated with issues such as stressful family events, family dysfunction, stress, anxiety, depression, poor self-control, poor problem-solving skills, high negative affect, low self-esteem, neurotic symptoms, and low psychological well-being.[26,27] Because women who experience DV are essentially in a disturbing family situation, they experience high levels of stress and psychologically numerous problems. Probably these issues tend to lead to tobacco use.

This study found that women with low education were more at risk of physical abuse, psychological abuse, and other violent threats than others, and women with higher education are less likely to experience violence, which is similar to the results of other studies.[28,29] The husband's and wife's education is important in reducing DV. The finding is based on the fact that women with low education have usually low-educated spouses. The low level of education not only reflects the cultural and social levels of the family, but also, affects the economic status of the family, which in turn exacerbates DV.

This study showed that income level was related to DV, which is consistent with the results of other studies.[21] Low-income levels and poverty lead to deprivation of education and amenities, and low-income people usually live on the outskirts of the city, all of which affect DV and its severity.

The study showed that family size was related to DV, which is similar to the results of other studies.[22] The general opinion among researchers of the field of family violence is that large families are more prone to violence because they have more problems with economic resources. Also, family size can frustrate the family and it is not solved easily. Therefore, violence not only becomes a potential answer to this frustration, but also, it can be an acceptable one.

The study showed that women's addiction was related to DV, which is consistent with the results of other studies.[18] Women's addiction is mainly associated with afflicting at home, and it also causes financial and social problems within this group, which in turn affects family relationships and conflicts.

The study showed that polygamous was related to DV, women whose husbands have more than one wife, have more problems and conflicts with their husbands that lead to violence against them, which is similar to the results of other studies.[20] Polygamy is related to family structure and the family psycho space instability, and disturbs the mental balance and marital adjustment, which decreases life satisfaction and becomes a critical and abnormal situation. These women are more susceptible to mental disorders and have more psychological problems than others.[30] Women in polygamy are generally literate and unemployed, and their husbands are less literate than other men. These women also have a large age difference from their spouses.

The study showed that women's education, smoking, income level, and polygamy were important predictors of DV. This is consistent with the results of other studies.[20,21] The education level is related to DV because it reflects the cultural, social, and income level of the family[18] since the low income causes stress, family conflict, and reduction of life satisfaction, it can create a stressful atmosphere and violence in the family.[28] Many studies have shown that women in such situations resort to tobacco and smoking to escape stress and conflicts.[21] Now, if these variables are combined with polygamy, which can lead to family stress and conflict, also, it can increase the rate and severity of DV.[20] As a result, women under methadone maintenance because of their history of addiction and unemployment are generally worse off conditions than other women, and thus, they experience greater and more severe DV.

This study indicated a higher prevalence and intense DV in women undergoing methadone treatment compared to other women. The substance use and its psychological, social, and economic consequences are probably the reasons for these conditions.

Limitations
Despite the new insights that the present study provides about the status of women treated with methadone, there are some limitations. First, the design of study is cross-sectional, which avoid the accurate understanding of the relationships between nature of factors. Second, self-reporting questionnaires usually overestimates the prevalence of DV. This problem is more prevalent

among people with personality disorders, who may easily overstate or minimize their report. These limitations can be significantly resolved by using longitudinal studies and individually interviewing participants. Thirdly, the generalizability of the results is low because sampling was limited to a single geographic region with unique social, and cultural characteristics. Therefore, further extensive research needs to be carried out.

Conclusion

The prevalence of recurrent DV was high in women undergoing methadone treatment. The most common type of DV was mental abuse. The results showed that while the overall rate of DV was high in Zahedan population, the prevalence of recurrent DV was higher in women under MMT. Recurrent DV is the repeat of violence against the victim. The healthcare team and the managers of MMT centers should consider supportive care for women under MMT. Because these women have low level of education and income, they may be the victims of several sources of violence. The education regarding the violence, the available resources and supports can help them to face with the problem. It can lead to lower levels of relapse and mental health problems.

Authors' contributions
ZG and YZ performed conceptualization and data curation. AP and HR contributed to formal analysis, methodology, software, and validation. YZ, FS, and MS performed funding acquisition, investigation. YZ and MS performed resources, visualization, and roles/writing original draft. YZ and FS performed writing-review and editing.

Conflict of Interests
There is no conflict of interests.

References

1. Lee FH, Yang YM, Wang HH, Huang JJ, Chang SC. Conditions and patterns of intimate partner violence among Taiwanese women. Asian Nurs Res (Korean Soc Nurs Sci). 2015;9(2):91-5. doi: 10.1016/j.anr.2015.05.004.
2. Butchart A, Mikton C, Dahlberg LL, Krug EG. Global status report on violence prevention 2014. Inj Prev. 2015;21(3):213. doi: 10.1136/injuryprev-2015-041640.
3. Hayes S, Jeffries S. Romantic Terrorism: An Auto-Ethnography of Domestic Violence, Victimization and Survival. Springer; 2015.
4. Yaghoubi-Doust M. Reviewing the association between the history of parental substance abuse and the rate of child abuse. Addict Health. 2013;5(3-4):126-33.
5. Choenni V, Hammink A, van de Mheen D. Association between substance use and the perpetration of family violence in industrialized countries: a systematic review. Trauma Violence Abuse. 2017;18(1):37-50. doi: 10.1177/1524838015589253.
6. Daigneault I, Vézina-Gagnon P, Bourgeois C, Esposito T, Hébert M. Physical and mental health of children with substantiated sexual abuse: gender comparisons from a matched-control cohort study. Child Abuse Negl. 2017;66:155-65. doi: 10.1016/j.chiabu.2017.02.038.
7. Wauchope BA, Straus MA. Physical punishment and physical abuse of American children: incidence rates by age, gender, and occupational class. In: Physical Violence in American Families. Routledge; 2017. p. 133-48.
8. Mathews B, Collin-Vézina D. Child sexual abuse: toward a conceptual model and definition. Trauma Violence Abuse. 2019;20(2):131-48. doi: 10.1177/1524838017738726.
9. Owusu Adjah ES, Agbemafle I. Determinants of domestic violence against women in Ghana. BMC Public Health. 2016;16:368. doi: 10.1186/s12889-016-3041-x.
10. Bahrami G. Domestic violence on women: evidence from Iran. Asian J Res Soc Sci Humanit. 2014;4(5):688-94.
11. Fekadu E, Yigzaw G, Gelaye KA, Ayele TA, Minwuye T, Geneta T, et al. Prevalence of domestic violence and associated factors among pregnant women attending antenatal care service at University of Gondar Referral Hospital, Northwest Ethiopia. BMC Womens Health. 2018;18(1):138. doi: 10.1186/s12905-018-0632-y.
12. Howard LM, Trevillion K, Khalifeh H, Woodall A, Agnew-Davies R, Feder G. Domestic violence and severe psychiatric disorders: prevalence and interventions. Psychol Med. 2010;40(6):881-93. doi: 10.1017/s0033291709991589.
13. Selic P, Pesjak K, Kersnik J. The prevalence of exposure to domestic violence and the factors associated with co-occurrence of psychological and physical violence exposure: a sample from primary care patients. BMC Public Health. 2011;11:621. doi: 10.1186/1471-2458-11-621.
14. Nagassar RP, Rawlins JM, Sampson NR, Zackerali J, Chankadyal K, Ramasir C, et al. The prevalence of domestic violence within different socio-economic classes in Central Trinidad. West Indian Med J. 2010;59(1):20-5.
15. Bart G, Lenz S, Straka RJ, Brundage RC. Ethnic and genetic factors in methadone pharmacokinetics: a population pharmacokinetic study. Drug Alcohol Depend. 2014;145:185-93. doi: 10.1016/j.drugalcdep.2014.10.014.
16. Bozchelou S, Delirrad M. Effects of methadone maintenance therapy on thyroid function of adult men. Toxicol Res. 2019;35(1):9-12. doi: 10.5487/tr.2019.35.1.009.
17. Talaei A, Afzaljavan F, Niroumand S, Nejati R. Prevalence of respiratory disorders during sleep among subjects of methadone maintenance therapy program. Addict Health. 2021;13(3):176-84. doi: 10.22122/ahj.v13i3.311.
18. Derakhshanpour F, Mahboobi HR, Keshavarzi S. Prevalence of domestic violence against women. J Gorgan Univ Med Sci. 2014;16(1):126-31. [Persian].
19. Terrazas-Carrillo EC, McWhirter PT. Employment status and intimate partner violence among Mexican women. J Interpers Violence. 2015;30(7):1128-52. doi: 10.1177/0886260514539848.
20. Ali AA, Yassin K, Omer R. Domestic violence against women in Eastern Sudan. BMC Public Health. 2014;14:1136. doi: 10.1186/1471-2458-14-1136.
21. Mahapatro M, Gupta R, Gupta V. The risk factor of domestic violence in India. Indian J Community Med. 2012;37(3):153-7. doi: 10.4103/0970-0218.99912.
22. Ghazanfari F. Effective factors on violence against women in Lorestan county towns. Yafteh. 2010;12(2):5-11. [Persian].
23. Saadati M. Domestic violence, mental health threat. Soc Secur Stud. 2010;8(24):61-90.

24. Mohammadi M, Nedjat S, Dargahpour M, Mehri A, Majdzadeh R. Factors associated with self-burning among women in reproductive age of Ilam: a case-control study in a western part of Iran. Arch Suicide Res. 2020:1-9. doi: 10.1080/13811118.2020.1823917.

25. Bahrami M, Shokrollahi P, Kohan S, Momeni G, Rivaz M. Reaction to and coping with domestic violence by Iranian women victims: a qualitative approach. Glob J Health Sci. 2015;8(7):100-9. doi: 10.5539/gjhs.v8n7p100.

26. Hebert KK, Cummins SE, Hernández S, Tedeschi GJ, Zhu SH. Current major depression among smokers using a state quitline. Am J Prev Med. 2011;40(1):47-53. doi: 10.1016/j.amepre.2010.09.030.

27. Wittmann M, Paulus M, Roenneberg T. Decreased psychological well-being in late 'chronotypes' is mediated by smoking and alcohol consumption. Subst Use Misuse.

28. Rasoulian M, Jalali AH, Habib S, Molavi Nojomi M, Ghanbari Jolfaei A, Bolhari J. Risk factors of domestic violence in Iran. Iran J Psychiatry Behav Sci. 2017;11(1):e4280. doi: 10.5812/ijpbs.4280.

29. Wali R, Khalil A, Alattas R, Foudah R, Meftah I, Sarhan S. Prevalence and risk factors of domestic violence in women attending the National Guard Primary Health Care Centers in the Western Region, Saudi Arabia, 2018. BMC Public Health. 2020;20(1):239. doi: 10.1186/s12889-020-8156-4.

30. Kalokhe A, Del Rio C, Dunkle K, Stephenson R, Metheny N, Paranjape A, et al. Domestic violence against women in India: A systematic review of a decade of quantitative studies. Glob Public Health. 2017;12(4):498-513. doi: 10.1080/17441692.2015.1119293.

2010;45(1-2):15-30. doi: 10.3109/10826080903498952.