

# The Comparison of Violence and Sexual Function between Fertile and Infertile Women: A Study from Iran

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## ABSTRACT

**Introduction:** Fertility is one of the most important variables. Infertility and others' attitudes towards this factor make infertile couples vulnerable to mental and emotional disturbances, which ultimately lead to sexual dysfunction and domestic violence.

**Aim:** To investigate violence and sexual function among fertile and infertile women.

**Materials and Methods:** This was a cross-sectional study on 346 individuals (147 infertile women and 199 fertile women) visiting women's clinic in Jahrom, Iran from April to October 2017. The research tools were Domestic Violence Inventory and Female Sexual Function Index (FSFI). t-test was used to compare means between the groups and chi-square was used to investigate the relationship of domestic violence with other variables.

**Results:** Comparison of dimensions of domestic violence between fertile and infertile women showed that physical violence

( $p=0.01$ ), sexual violence ( $p=0.02$ ) and psychological violence ( $p<0.001$ ) were higher in infertile women than fertile women and this increase was statistically significant. Comparison of sexual function dimensions between the two groups showed that all dimensions were significantly lower in infertile women than fertile women ( $p<0.05$ ). No significant relationship was found between domestic violence and sexual function in infertile women.

**Conclusion:** The results showed that dimensions of violence were higher in infertile women than fertile women and sexual function was lower in infertile women than fertile women. Therefore, health managers and politicians should pay specific attention to infertile women and include psychological and sexual counselling alongside infertility treatments. On the other hand, screen for domestic violence should be practised in infertile women as high-risk group.

**Keywords:** Domestic violence, Female sexual function index, Non-physical abuse, Sexual dysfunction

## INTRODUCTION

Infertility is defined as the inability to conceive after one year of unprotected sexual intercourse (in absence of contraceptive methods) [1]. Hence, infertility was described as a global health issue with physical, psychological and social dimensions at the International Conference in Bangkok in 1988 [2].

Infertility is a common problem and one of all four couples is suffering from infertility in advanced countries according to statistics of the World Health Organisation, and prevalence of infertility in Iran was reported as 8% [3]. In fact, childbearing is an important marital goal. Therefore, infertility is one of the major causes of marital crisis [4]. If couples cannot cope with stressors or are not socially supported, these negative issues can lead to domestic violence in either long-term or short-term [5]. Infertility is known as a severe psychological and interpersonal stressor. Most experts believe that there is a relationship between infertility and sexual dysfunction [6]. Infertile couples complain about lower self-esteem, sexual function and marital satisfaction compared to fertile couples [7]. Sensitivity of infertility varies depending on cultural norms of the society. Accordingly, infertility and negative attitudes towards this factor impose extreme pressure on women, threaten security of family bonding, leads to manifestation of various forms of domestic violence, stigmatisation, exclusion and separation in the societies where women are only valued for the sake of reproduction. Several studies [8,9] have shown that infertile women are more prone to depression, anxiety, stress, and stressful events that underlie domestic violence [10]. Violence against women is beyond social and territorial boundaries and is discussed as the most serious societal disaster for many years [11]. Women in any territory and

from any class of society are more at the risk of domestic violence [12,13]. 10-75% of women have experienced violence during their lives [14]. In a study, the prevalence of violence against infertile women was estimated as 61.8% in Iran, at 1.8% in Hong Kong and as 33.6% in Turkey [4]. Infertility is one of the factors that underlie domestic violence against women. Generally, infertility causes a variety of psychosocial and cultural problems.

Since, infertility is a serious problem in Iran and leads to important issues such as abuse, negligence, social exclusion, divorce and separation, it is essential to determine infertility-induced problems and psychosocial consequences. The present study aimed to assess violence and sexual function among fertile and infertile women.

## MATERIALS AND METHODS

This cross-sectional study was performed on 346 women visiting Women's Clinic in Jahrom, Iran from April to October 2017. To determine the sample size, confidence interval of 95% and test power of 80% was used. A convenient sampling method was used to select eligible individuals from infertile women who were definitively diagnosed with infertility ( $n=147$ ) and 199 fertile (women were randomly selected from those women visiting the women's clinic for other reasons. All ethical issues were observed and the participants consented to participate in the study. The study was approved by the Ethics Committee of the Jahrom University of Medical Sciences, Iran. (REC.1394.084.JUMS).

## Inclusion Criteria

Inclusion criteria were; Iranian nationality, having regular sexual relationship with their spouse and currently living with the spouse.

## Exclusion Criteria

Exclusion criteria were; having chronic diseases (hypertension, heart disease, diabetes), taking drugs affecting sexual function, having mental and psychological disorders in themselves and in families, taking antidepressants in the last six months.

The domestic violence against women questionnaire was used to measure spouse abuse in women and evaluate three dimensions of violence, namely physical, sexual and emotional violence. This questionnaire was adopted from the one used by Faramarzi M et al., in Iran, the reliability is 81% based on Cronbach's alpha method [15].

Domestic violence refers to violence or abuse by a spouse or a family member against another spouse or family member. A woman suffering from domestic violence should have responded positively to one of the questions on physical, sexual or emotional violence in the questionnaire. The questionnaire consisted of 36 items covering 12 items in physical violence, 9 items in sexual violence and 15 items in emotional violence. These items were used to assess and calculate domestic violence. To determine each type of domestic violence, the number of the women suffering from that type of violence (i.e. those who have given at least one positive answer to the questions on screen for the given type of violence) was divided by the whole population [13].

Female Sexual Function Index (FSFI) developed by Rosen R et al., was used to measure sexual function [16]. FSFI covered 19 questions for assessment of individuals in six domains of sexual desire, arousal, lubrication, orgasm, satisfaction and pain. The items were scored based on a five-point scale (from zero or one to five). Sum of scores of each domain was multiplied by coefficient of the given domain to obtain score of the given domain. The domain of desire covered questions 1 and 2, arousal encompassed questions 2, 4, 5 and 6, lubrication consisted of questions 7 and 8, 9 and 10, orgasms covered questions 11, 12 and 13, satisfaction encompassed questions 14, 15 and 16 and pain consisted of questions 17, 18 and 19. For two-question, three-question and four-question domains, 0.6, 0.4 and 0.3 factor coefficients were used respectively. Finally, score of each domain was obtained by sum of scores of the domain multiplied by the given factor coefficient. Minimum of each domain was 0-1.2 or 1.8 and maximum of each domain was 6. Finally, total score of sexual function was obtained from sum of scores of all domains. The range of this scale is between 2 and 36 [16] and also, the research was done by Fakhri A et al., in Iran was verified [17].

## STATISTICAL ANALYSIS

All analyses were performed using the Statistical Package for the Social Sciences Software (SPSS) version 18.0 Descriptive and analytical statistics were used to analyse the data. t-test was used to compare sexual function between the groups. Chi-square was used to investigate the relationship of violence domains with sexual function in fertile and infertile groups.

## RESULTS

In this study, 199 (57.5%) fertile women and 147 (42.5%) infertile women participated. Demographic information are given in [Table/Fig-1]. Chi-square was used to examine the difference in spouse abuse between fertile and infertile groups [Table/Fig-2].

All three types of violence (physical, sexual, and psychological) were significantly higher in infertile women than fertile women. The data indicates that the highest rate of violence against infertile women was 52.4% in psychological domain and the lowest rate was 24.5% in the sexual domain [Table/Fig-2].

t-test was used to evaluate the difference in sexual function between the two groups. Contents of [Table/Fig-3] indicate that all domains of sexual function (desire, arousal, lubrication, orgasm, intercourse pain, sexual satisfaction) and mean of sexual function in the infertile women are significantly lower than fertile women.

Contents of [Table/Fig-4] show a statistically significant relationship between sexual dysfunction and spouse abuse in the studied

cases. Accordingly, physical and emotional violence had the highest relationship with sexual dysfunction. However, no statistically significant relationship was found between sexual violence and sexual dysfunction.

Characteristics		Fertile	Infertile	p-value
		N (%)		
Woman's age (mean, SD)		27.68±5.21	28.38±5.30	0.37
Educational level	Primary school	30 (15.1)	29 (19.7)	0.22
	Secondary school	55 (27.6)	37 (25.2)	
	College or university	114 (57.3)	81 (55.1)	
Employment status	Housewife	116 (59.9)	79 (40.5)	0.24
	Employed	83 (55)	68 (45)	
Husband's education	Primary school	44 (22.1)	42 (28.6)	0.08
	High school	56 (28.1)	34 (23.1)	
	College or university	98 (49.7)	71 (48.3)	
Husband's occupation	Employed	120 (60.3)	92 (62.6)	0.45
	Non-employed	79 (39.7)	55 (37.4)	

[Table/Fig-1]: Demographic characteristics of the participants.

Group	Emotional violence		Sexual violence		Physical violence		Total violence	
	No	Yes	No	Yes	No	Yes	No	Yes
Fertile	134 (67.3)	65 (32.7)	164 (82.4)	35 (17.6)	156 (78.8)	46 (23.2)	128 (64.3)	71 (35.7)
Infertile	70 (47.6)	77 (52.4)	107 (72.8)	40 (27.2)	97 (66)	50 (34)	64 (43.5)	83 (56.5)
p-value	p<0.0001		p=0.02		p=0.01		p<0.0001	

[Table/Fig-2]: Comparison of types of violence between fertile and infertile women.

\*p-value: Chi-square test: Types of Violence between fertile and infertile group

Sexual function domains	Infertile group (n=147)	Fertile group (n=199)	*p-value
	Mean±SD		
Libido	1.50±1.71	3.67±1.23	p<0.0001
Sexual arousal	2.33±1.81	3.75±1.39	p<0.0001
Orgasm	2.74±1.98	3.74±1.52	p<0.0001
Lubrication	3.76±1.39	3.20±2.06	p=0.003
Sexual satisfaction	3.47±2.10	4.78±3.97	p<0.0001
Pain	2.81±2.22	3.04±2.12	p=0.3
Total number of sexual function	22.53±6.63	16.31±9.98	p<0.0001

[Table/Fig-3]: FSFI questionnaire scores in fertile and infertile women.

Numbers are presented as Means±SD

\*p-value: Student's T-test: between fertile and infertile group

Types of Violence	FSFI<26.5	26.5<FSFI	p-value
Emotional violence	62 (51.2)	15 (57.7)	p=0.3
Sexual violence	30 (24.8)	6 (23.1)	p=0.5
Physical violence	37 (30.6)	9 (34.6)	p=0.4
Total violence	68 (56.2)	14 (53.8)	p=0.4

[Table/Fig-4]: Relationship between sexual dysfunction and violence in infertile women.

\*p-value: Chi-Square Test

## DISCUSSION

The present study aimed to investigate the effect of infertility and its role on incidence of sexual disorders and spouse abuse in infertile women. The results of this study showed that spouse abuse in infertile women was higher than fertile women in all domains of physical, psychological and sexual violence. These results were consistent with the results of the study conducted by Shindel AW et al., [18]. Abedinia V et al., acknowledged that the prevalence of depression and mental disorders in infertile couples in Iran is higher than in other countries. This can lead to domestic violence [19].

Scholars have reported impulsive behaviours, scattered anger, depression, helplessness, anxiety, inefficacy, inferiority and negative attitudes towards themselves [20]. Studies have shown that negative self-concept and low self-esteem among abusers and those treated abusively compensate their unfulfilled success by unreasonable behaviours such as violence against their spouse to reduce their anxiety and distress [21].

The results showed that sexual problems in infertile women are more than fertile women. Kawad K et al., showed a significant difference in sexual dysfunction in infertile women compared to fertile women [22]. Chachamovich JR et al., showed that marital adjustment in infertile women was lower than the control group in the US [23]. Hashemi S et al., stated that infertility is the only effective factor in sexual function in these women and showed that infertile women suffer from higher rates of overall sexual dysfunction compared to fertile women. The former experience higher rates of sexual dysfunction in domains of satisfaction, orgasm, lubrication and sexual arousal than the latter [24]. Millheiser LS et al., reported lower scores of total sexual function, arousal and desire in infertile women compared with fertile women [25].

Infertile couple experience fear, failure, inefficacy and the sense of losing spouse during sexual intercourse. They feel coerced to have sex with their partners that ultimately reduce sexual desire, fail to reach orgasm, cause other sexual dysfunctions and even fatigue in sexual relationships [24].

The results of this study also showed no significant relationship between spouse abuse and sexual dysfunction in infertile women. Various studies have shown no significant relationship between any type of spouse abuse and sexual dysfunction in infertile women [20,21]. These results were consistent with the results of this study. Some experts believe that many infertility-induced sexual disorders in women are caused by unsolved dichotomy of motherhood and the Oedipus complex. However, some other scholars believe that gender identity conflicts are involved in these disorders and infertility can affect sexual relationships between the couples.

## LIMITATION

Limitations of this study were the participants may have not recorded domestic violence due to cultural and social norms governing the society. The participants were only selected from those women visiting a public clinic. Therefore, the sample cannot be generalised to the entire population.

## CONCLUSION

Infertility is a serious and chronic problem that can affect couples' marital relationships through sexual dysfunction. On the other hand, infertility as a major factor can underlie domestic violence. Therefore, screen for domestic violence in infertile women should be on the agenda of women's health promotion programs.

## ACKNOWLEDGEMENTS

This study is a part of research work conducted at Jahrom University of Medical Sciences. The authors hereby like to thank the Research Deputy of Jahrom University of Medical Sciences, Jahrom, Iran, for their financial support of this study. We would like to thank all individuals who participated in this study.

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**FINANCIAL OR OTHER COMPETING INTERESTS:** As declared above.

Date of Submission: **Jul 27, 2018**

Date of Peer Review: **Sep 19, 2018**

Date of Acceptance: **Nov 19, 2018**

Date of Publishing: **Jan 01, 2019**