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The Relationship Between Exposure to Violence from Husband and Their Families and Relatives and Sexual Dysfunction in Women with Infertility*

İnfertil Kadınlarda Eş ve Yakın Şiddetine Maruziyet ile Cinsel İşlev Bozukluğu Arasındaki İlişki

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ABSTRACT

Objective: The aim of this study was to investigate the relationship between exposure to violence from husband, and their families and relatives, and sexual dysfunction in women with infertility.

Methods: This cross-sectional study was conducted on 202 women with infertility at an Assisted Reproductive Techniques Center of a state university located in the west of Turkey. Infertile Women's Exposure to Violence Determination Scale, Index of Female Sexual Function, and information form were used for obtaining data.

Results: The Infertile Women's Exposure to Violence Determination Scale total score was 40.5 ± 9.9. The Index of Female Sexual Function score was 34.9 ± 6.4, and 36 women (17.8%) had sexual dysfunction. The Infertile Women's Exposure to Violence Determination Scale total score of the women with sexual dysfunction (47.8 ± 14.7) was significantly higher than the total score of the women without sexual dysfunction (38.9 ± 7.7) ($p < 0.001$). Total score of the Infertile Women's Exposure to Violence Determination Scale was negatively correlated with total score of the Female Sexual Function of Index ($r = - 0.268$; $p < 0.001$).

Conclusion: In this study was found that women with infertility level of exposure to violence were low. However, sexual dysfunction increases as the level of exposure to violence increases. Of the infertile women should be determined exposure to violence and sexual dysfunction levels.

Key Words:
Infertility; women; violence; sexual dysfunction.

ÖZ

Amaç: Bu çalışmanın amacı, infertil kadınlarda eş ve yakın şiddetine maruziyet ile cinsel işlev bozukluğu arasındaki ilişkiyi incelemektir.

Yöntemler: Kesitsel tipte ki bu çalışma, Türkiye'nin batısında yer alan bir devlet üniversitesinin Yardımcı Üreme Teknikleri Merkezi'nde infertil 202 kadın ile gerçekleştirildi. Verilerin elde edilmesinde İnfertil Kadınların Şiddete Maruz Kalma Durumunu Belirleme Ölçeği, Kadın Cinsel İşlev İndeksi ve bilgi formu kullanıldı.

Bulgular: İnfertil Kadınların Şiddete Maruz Kalma Durumunu Belirleme Ölçeği toplam puanı 40.5 ± 9.9 idi. Kadın Cinsel İşlev İndeksi puanı 34.9 ± 6.4 olup 36 kadında (% 17.8) cinsel işlev bozukluğu vardı. Cinsel işlev bozukluğu olan kadınların, İnfertil Kadınların Şiddete Maruz Kalma Durumunu Belirleme Ölçeği toplam puanı (47,8 ± 14,7), cinsel işlev bozukluğu olmayan kadınların toplam puanından (38,9 ± 7,7) anlamlı düzeyde yüksekti ($p <0,001$). İnfertil Kadınların Şiddete Maruz Kalma Durumunu Belirleme Ölçeği toplam puanı ile Kadın Cinsel İşlev İndeksi toplam puanı arasında negatif korelasyon vardı ($r = - 0.268$; $p <0.001$).

Sonuç: Bu çalışmada infertil kadınların şiddete maruz kalma düzeylerinin düşük olduğu tespit edilmiştir. Ancak şiddete maruz kalma düzeyi arttıkça cinsel işlev bozukluğu da artmaktadır. İnfertil kadınların şiddete maruz kalma düzeyleri ve cinsel işlev bozuklukları belirlenmelidir.

Anahtar Sözcükler:
İnfertilite; kadın; şiddet; cinsel işlev bozukluğu.

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INTRODUCTION

According to the Women Health Organization (WHO), infertility is a reproductive system disease defined as the failure to achieve a clinical pregnancy despite regular unprotected sexual intercourse for 12 months or more. The WHO reported that an estimated 34 million women worldwide, especially in developing countries, are infertile for a variety of reasons (World Health Organization [WHO], 2020). There are two million infertile people in Turkey (Baydar and Yanikkerem, 2016). The prevalence of infertility is mostly affected by age, level of higher education and occupational status (Datta et al., 2016).

All women worldwide face the risk of exposure to violence, regardless of country, ethnicity, class, religion, economic and/or social status (Hacettepe University Institute of Population Studies, 2015). In developing and patriarchal societies in particular, fertility elevates the position of women in society, and as women give birth to children, they achieve acceptance and respect (Ataman and Arslan, 2010; Baydar and Yanikkerem, 2016). For this reason, “not having a child” can result in women with infertility experiencing domestic violence. Women with infertility who are subjected to violence are often exposed to violence by their husbands, but they can also be subjected to violence by their husbands' families (Ardabily et al., 2011). The prevalence exposure to husband and families violence in women with infertility has been reported as:15.0% - 72.0% in Turkey, 31.0% - 38.3% in Nigeria, 64% in Pakistan, 77.8% in India; 61.8% - 88.9% in Iran and in 45.7% - 96.3% Egypt (Aduloju et al., 2015; Akpinar et al., 2019; Alijani et al., 2018; Ardabily et al., 2011; Celik and Kırca, 2018; Ghaly et al., 2019; Iliyasua et al., 2016; Ozgoli et al., 2016; Pasi et al., 2011; Rahebi et al., 2019; Sahin et al., 2018; Sami and Ali, 2012; Yildizhan et al.,2009).

Violence against women with infertility is an important problem that adversely affects physical and mental health and whose consequences can include sexual dysfunction (SD) (Sami and Ali, 2012). SD has been reported in more than 40% of women with infertility (Millheiser et al., 2010). SD occurs in the form of loss of sexual desire, sexual arousal, and anorgasmia. This complicates pregnancy development both directly and indirectly (Bayar et al., 2014). In a study, it was reported that women with infertility exposed to violence (29.0%) had lower sexual satisfaction rates than women with infertility not exposed to violence (56.8%) (Yildizhan et al., 2009).

Exposure to all forms of violence for women with infertility is an important problem that negatively affects physical and mental health, can lead to psychosocial problems, and sexual problems such as SD. In societies such as that of Turkey, where patriarchy is still present and gender equality not fully realized, the inability of the woman, whose role and fertility are deemed important, to provide a child for the family, may lead to an increased risk of violence to her. (Baydar and Yanikkerem, 2016; Potur et al., 2019; Sami and Ali, 2012). When the literature is analyzed, it is seen that the prevalence of studies related to violence and its forms in women with infertility is quite high (Aduloju et al., 2015; Akpinar et al., 2019; Alijani et al., 2018; Ardabily et al., 2011; Celik and Kırca, 2018; Ghaly et al., 2019; Iliyasua et al., 2016; Ozgoli et al., 2016; Pasi et al., 2011; Rahebi et al., 2019; Sahin et al., 2018; Sami and Ali, 2012; Yildizhan et al.,2009). However, there are very few studies in the literature examining the relationship between the level of violence experienced by infertile women exposure to violence from husband and families, and SD (Dhont et al., 2011; Moghaddam et al., 2016; Poornowrooz et al., 2019; Potur et al., 2019; Sami and Mete, 2012).

The purpose of this study is to uncover the relationship between exposure to violence from husband, and their families, and sexual dysfunction in women with infertility. More specifically, the study aimed to determine:

- Are women with infertility exposed to violence types by their husbands and by their families and relatives?
- Are infertility increases level of exposed to the violence by their husband and their families and relatives?
- Is there a relationship between levels of exposed to their violence and sexual dysfunction?

METHOD

Study Design

This cross-sectional study was conducted on 202 women with infertility between February 01, 2016 and 03 April 2017 at an Assisted Reproductive Techniques Center of a state university located in the west of Turkey.

Sample

The universe of this study consisted of all women who applied to the Assisted Reproductive Techniques Center between February 1, 2016 and April 3, 2017. Sample size was calculated as 202 by using a priori power analysis assuming a 0.25 correlation coefficient between Infertile Women’s Exposure to the Violence Determination Scale and the Index of Female Sexual Function with an alpha level of 5%, and with a power of 95%. For the purposes of the study, women who had been diagnosed clinical infertility; volunteer to participate and who had been in receipt of assisted reproductive techniques treatment for at least 6 months were included.

Data Collection

No sampling method was used in the study. The researcher routinely interviewed with infertile women in the center three days a week. Data collection was terminated when the sample size reached 202 infertile women. The patients were enrolled in the study consecutively. Before starting to collect data, volunteer participants were informed about the research. Verbal informed consent was obtained. The data were collected through interviews, approximately of 15 minutes, conducted with each woman face to face in the ART Center interview room. The data form was filled by the participants. The personal information form, Infertile Women's Exposure to Violence Determination Scale (IWEVDS), and Index of Female Sexual Function (IFSF) were used for obtaining data.

Personal Information Form: This was prepared by researchers following a review of the literature and consisted of six questions in relation to the personal characteristics of the women with infertility, and six questions concerning aspects of their infertility and violence experienced, 12 questions in total (Ardabily et al., 2011; Sami and Ali, 2012; Turan et al., 2014; Yildizhan et al., 2009).

Infertile Women's Exposure to Violence Determination Scale (IWEVDS): The IWEVDS, developed by Onat in 2014, consists of 31 questions in a 5-point Likert scale that evaluates the violence that women with infertility are exposed to. The scale includes 5 sub-dimensions: "domestic violence, social pressure, punishment, exposure to traditional practices and exclusion". From the scale, a minimum score of 31 points can be obtained, with the highest 155 points. As the IWEVDS total score increases, the level of exposure to violence increases. Onat determined the Cronbach alpha reliability coefficient of the scale to be 0.96 (Onat, 2014). In this study, the Cronbach alpha reliability coefficient was found to be 0.87.

Female Sexual Function of Index (FSFI): The Female Sexual Function of Index (FSFI) was developed by Kaplan et al. in 1999 and its validity and reliability in Turkish were done by Yilmaz and Eryilmaz in 2004 (Yilmaz and Eryilmaz, 2004). The scale questions the sexual function status of the woman over the course of the previous month. It consists of 9 questions in total. It has three sub-dimensions: "Discomfort in sexual intercourse, frequency of sexual intercourse/libido and sexual satisfaction". The highest score on the scale is 49, with the lowest 9. A total mean score of ≤30 is considered risky for sexual dysfunction. Yilmaz and Eryilmaz (2004) determined the Cronbach alpha value of the scale to be 0.82. In this study, the Cronbach's alpha value of the scale was found to be 0.82.

Statistical Analysis

The suitability of variables to normal distribution was examined using the Shapiro-Wilk test. Results were shown as mean ± SD or number and %. The Mann-Whitney U test was used in a comparison of FSFI > 30 and ≤ 30 with the IWEVDS score total and sub-dimension scores due to non-normal distribution; Spearman Correlation Analysis was used to analyze the relationship between FSFI total and sub-dimension scores and IWEVDS total and sub-dimension scores. The data obtained in the study were analyzed using SPSS (Statistical Package for Social Sciences) for Windows 20.0 program.

Ethical Considerations

Ethics committee approval was obtained from the Committee for Evaluation of Scientific Research of Trakya University, Faculty of Medicine (2016/07). Following receipt of ethical approval, written permission was obtained from the Chief of the ART Center in order to collect the research data. The study was performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

Study Limitations

The study data were obtained ART Center of a state university hospital. Therefore, it is difficult to generalize the results of the study.

RESULTS

The mean age of women with infertility (n = 202) was 30.5 ± 4.7, and the mean age at first marriage was 24.1 ± 4.9. The women 83.2% had of nuclear family structure, 56.4% had attained a high school level of education or above and 55.4% were not working. Income status were medium in 77.2% of the women (Table 1).

Of the women 79.7% were primary infertile and 20.3% were secondary infertile. When the cause of infertility was queried; 43.6% of women were not clear as to the cause of their infertility, 23.3% had stated that their husbands had a low sperm count and poor quality sperm, 20.8% had early ovarian failure, 8.4% had various diseases, and 4% stated that azoospermia was the cause. It was found that for 59.9% of the women, the duration of infertility treatment was between 6 months and 2 years. Of the women 55.9% stated that infertility was a source of great sadness for them, 31.7% stated that it did not affect their marriage, and 58.4% stated that their husband understood their not having children. Of the women 10.9% stated that they were exposed to sexual violence by their husbands and 2% to psychological violence, 25.3% of them were exposed to psychological violence and pressure by their families. The women stated that they were not exposed to physical violence by their husbands (Table 2).

Table 1. The Characteristics of the Women with Infertility (n = 202)

	X ± SD
Mean age (years)	30.53±4.7
Age of marriage	24.07±4.9
	n (%)
Family structure	
Nuclear family	168 (83.2)
Extended family	34 (16.8)
Education level	
Primary and lower	88 (43.6)
High school and higher	114 (56.4)
Employment status	
Not working	90 (44.6)
Working	112 (55.4)
Income status	
Good	42 (20.8)
Medium	156 (77.2)
Bad	4 (2.0)

Mean (X) ± Standard deviation (SD)

Table 2. The Characteristics of Women with Infertility Related to Infertility and Types of Violence Experienced (n = 202)

	n %
Type of infertility	
Primary infertile	161 (79.7)
Secondary infertile	41 (20.3)
The cause of infertility	
Early ovarian failure	42 (20.8)
Low sperm count and poor quality	47 (23.3)
Azospermi	8 (4.0)
Various diseases	17 (8.4)
Unexplained infertility	88 (43.6)
Duration of infertility treatment	
6 months-2 years	121 (59.9)
3-5 years	47 (23.3)
6-8 years	14 (6.9)
9 years and over	20 (9.9)
The effect of infertility on himself and his marriage	
Sadness	113 (55.9)
Fear of divorce	3 (1.5)
Despair	14 (6.9)
It doesn't affect itself	8 (4.0)
Doesn't affect your marriage	64 (31.7)
The reaction of husband to the condition of infertility	
Understanding	118 (58.4)
Being supportive	34 (16.8)
In search of treatment	30 (14.9)
Frustration, angry, feeling guilty	20 (9.9)
Exposure to violence	
Yes	77 (38.2)
No	125 (61.8)
Types of violence experienced	
Physical violence (husband)	0 (0.0)
Psychological violence (husband)	4 (5.2)
Sexual violence (husband)	22 (28.6)
Psychological violence and oppression (their families and relatives)	51 (66.2)

The IWEVDS mean score of the women with infertility was 40.5 ± 9.9 and it was determined that they had been subjected to a low level of violence. The FSFI mean score was 34.9 ± 6.4. According to this result, SD (FSFI ≤ 30) was detected in 17.8% of women. Women with SD had a significantly higher IWEVDS score (47.8 ± 14.7) than women without SD (38.9 ± 7.7) (p < 0.001) (Table 3).

With respect to FSFI total and sub-dimensions of “discomfort during sexual intercourse, sexual intercourse frequency/libido, sexual satisfaction” and IWEVDS total (p < 0.001; r: - 0.268), “domestic violence (p = 0.001; r: - 0.229), social pressure (p < 0.001; r: - 0.284), punishment (p = 0.006; r: - 0.192), exposure to traditional practices (p = 0.003; r: - 0.211) and exclusion (p < 0.001; r: - 0.266)” between subscale scores it was determined that there was a significant negative weak correlation There was no significant relationship between only the FSFI “sexual satisfaction” sub-dimension and the IWEVDS ’punishmentQ sub-dimension (p = 0.066; r: - 0.130) (Table 4).

Table 3. Comparison of IWEVDS Total and Sub-Dimension Score with IFSF Total Score

IWEVDS	**IFSF >30 (No SD)** (n=166, 82.2 %)	**IFSF ≤30 (Yes SD)** (n=36, 17.8 %)	**Total score**	**p***
	X ± SD	**X ± SD**	**X ± SD**	
IWEVDS total score	38.9 ± 7.7	47.8 ± 14.7	40.5 ± 9.9	< 0.001
IWEVDS sub-dimensions				
Domestic violence	12.3 ± 2.3	14.9 ± 5.1	12.7 ± 3.1	0.001
Social pressure	8.0 ± 1.2	9.4 ± 2.3	8.2 ± 1.6	< 0.001
Punishment	7.9 ± 2.4	9.5 ± 3.5	8.2 ± 2.7	0.010
Exposure to traditional practices	7.4 ± 3.2	9.5 ± 4	7.7 ± 3.5	0.002
Exclusion	3.4 ± 0.8	4.5 ± 1.9	3.6 ± 1.2	< 0.001

* Mann-Whitney U test; Mean (X); ± Standard deviation (SD); IWEVDS: Infertile Women's Exposure to Violence Determination Scale; IFSF: Index of Female Sexual Function

Table 4. Relationship Between IWEVDS Total and Sub-Dimension Mean Scores and IFSF Mean Score

		IFSF			
IWEVDS		**Total score**	Discomfort during sexual intercourse	Sexual intercourse frequency/libido	Sexual satisfaction
Total score	r_s	- 0.268	- 0.242	0.332	- 0.193
	p	< 0.001	0.001	< 0.001	0.006
Domestic violence	r_s	- 0.229	- 0.205	0.417	- 0.236
	p	0.001	0.003	< 0.001	0.001
Social pressure	r_s	- 0.284	- 0.290	0.277	- 0.225
	p	< 0.001	< 0.001	< 0.001	0.001
Punishment	r_s	- 0.192	- 0.217	0.283	- 0.130
	p	0.006	0.002	< 0.001	0.066
Exposure to traditional practices	r_s	- 0.211	- 0.190	0.228	- 0.130
	p	0.003	0.007	0.001	0.066
Exclusion	r_s	- 0.266	- 0.256	0.304	- 0.208
	p	< 0.001	< 0.001	< 0.001	0.003

r_s: Spearman’s correlation analysis; IWEVDS: Infertile Women's Exposure to Violence Determination Scale; IFSF: Index of Female Sexual Function

DISCUSSION

In this study, the relationship between exposure to violence from husband, and their families, and sexual dysfunction in women with infertility is presented. In this study, conducted in the west of Turkey, it was found that women with infertility (n = 202) level of exposure to violence was low (40.5 ± 9.9 points IWEVDS) (Table 3). Ozturk et al. (2017) in study similarly founded that infertile women living on the İzmir (IWEVDS score 38.74 ± 11.49) were subjected to low levels of intimate violence. They stated that 5.0% of women were exposed to violence after being diagnosed with infertility. Potur et al. (2019) found that infertile women living on the Anatolian side of Istanbul were subjected to moderate violence (55.9 ± 12.8 points on the IWEVDS), which was mostly psychological violence by their husbands and their husband’s families. Celik and Kirca (2018) determined that in southwest Turkey women with infertility were exposed to high levels of violence (IWEVDS score of 120.04 ± 12.69). Moghaddam et al. (2016) in their study in Iran found that women with infertility were exposed to high levels of intimate violence (IWEVDS score 87.47 ± 41.88). Present study showed that women with infertility are exposed to sexual violence. Involuntary sexuality in infertile couples is a form of sexual violence that occurs with the dream of having a child. It can cause sexual dysfunction. Also, women with infertility are mostly exposed to psychological

violence and oppression by theirs husbands, families, and relatives (Table 2). Sami and Mete (2012) reported that women with infertility in Pakistan suffered the highest levels of verbal violence. They stated that in Pakistan regardless of who had been the cause of the infertility, it was believe that only the woman was responsible and that the woman, whose duty it was to bear children, should bear the burden of being infertile. In studies conducted in Iran, it was determined that women with infertility were exposed to a high level of violence and that this exposure was mostly psychological violence (Alijani et al., 2018; Ardabily et al., 2011; Ozgoli et al., 2016; Rahebi et al., 2019). Poornowrooz et al. (2019) also reported that in Iran, exposure to domestic violence is higher in women with infertility than in fertile women. Aduloju et al. (2015) reported that women with infertility suffered the greatest exposure to psychological violence in Nigeria; Almost all women with infertility in Egypt were reported to have experienced psychological violence from their husbands, and more than half of them were subjected to domestic violence (Ghaly et al., 2019). It has been reported that infertile women were exposed to domestic and spousal violence because they were infertile, and that they experienced the most psychological violence (Akpinar et al., 2019; Sahin et al., 2018; Yildizhan et al., 2009). Studies from the west of Turkey would appear to indicate that the severity of the violence women with infertility were exposed to was lower than that in the east and southwest. Infertile women were mostly exposed to sexual violence by their husbands, and psychological violence and oppression by their relatives (Ozturk et al., 2017; Potur et al., 2019; Celik and Kirca, 2018). In studies conducted in countries, where patriarchy is still present and gender equality is not fully realized, it has been stated that women with infertility accused of “not having a child” are exposed to violence (Moghaddam et al., 2016; Sami and Mete, 2012). In Western societies where gender equality is dominant, the place of women in society is not associated with their ability to give birth. Therefore, it is thought that the presence of gender equality in the country of residence will result in a lower level of violence against women with infertility.

In the study, it was founded that 17.8% of women with infertility experienced SD, while women with infertility with SD had significantly higher levels of exposure to violence (Table 3). It has been reported that SD is more common in women exposed to domestic violence, and that exposure to violence can cause SD problems in terms of physical and sexual health (Parish et al., 2004). The incidence of SD in women with infertility in Turkey was determined to be 78.8% by Emec et al., (2017), 32.9% by Turan et al. (2014), and 60% by Bayar et al. (2014). SD is a serious and chronic problem that can degrade the marriage relationship between couples. On the other hand, infertility can be the basis of domestic violence . Poornowrooz et al. (2019) stated that 56.2% of infertile Iranian women with SD had been exposed to violence. Tav et al. (2018) reported that married women who were not exposed to domestic violence had a higher quality of sexual life than those who were exposed to domestic violence. Mirblouk et al. (2016) determined that 74.5% of women with infertility in Dubai suffered from SD, while Gabr et al. (2017) determined that the prevalence of SD was 47% in women with infertility in Saudi Arabia. SD prevalence in women with infertility participating in this study was found to be lower than the results in the literature. However, women with infertility with SD have been found to have a high exposure to violence. During the infertility treatment process, generally take place sexual activity for fertility purpose. When by husband and their families and relatives violence the women with infertility the problem of SD is thought to occur.

In this study, it was founded as the level and type of violence experienced by women with infertility (domestic violence, social pressure, punishment, exposure to traditional practices, and exclusion) increased the levels of SD present in women also increased. In Turkey, Yildizhan et al. (2009) in their study of women with infertility exposed to violence found that they enjoyed less sexual satisfaction than women with infertility that were not exposed to violence. Poornowrooz et al. (2019) in their study in Iran determined that exposure to physical and emotional violence in women with infertility was associated with high levels of SD. Similarly, Dhont et al. (2011) determined that women with infertility exposed to violence in Africa had decreased frequency of sexual desire, sexual arousal and orgasm. In the literature, very few studies have been conducted that examine the relationship between the violence experienced in women with infertility and SD. The results of this study revealed that as the level by exposure to violence of women with infertility from by husband, and their families and relatives increased, the level of SD increased.

CONCLUSION

The level of violence that the infertile woman is exposed to is influenced by the perception of gender and the culture of the society. In societies where patriarchy is still present and gender equality has not been fully realized, husbands and their families and relatives use violence against women with infertility.

As a result, infertile women are mostly exposed to violence and pressure from their husbands and families. The infertile women with sexual dysfunction have higher exposure to violence, than the women without sexual dysfunction. As exposure to violence increases in infertile women, sexual dysfunction also increases.

In line with results obtained from our study, the following can be recommended:

- Throughout the infertility treatment process, it is necessary for nurses and health professionals to screen women for violence and SD, to determine their exposure to violence and their SD level and to provide social and psychological support.

- Individual-oriented sexual counseling, marriage and couples therapy services should be planned for women with infertility and their partners.

Author contributions:

H.K.S: Concept, Design, Supervision, Resources, Materials, Data Collection and/or Processing, Analysis and/or Interpretation, Literature Search, Writing Manuscript, Critical Review (50%).

S.Ö: Concept, Design, Supervision, Resources, Materials, Data Collection and/or Processing, Analysis and/or Interpretation, Literature Search, Writing Manuscript, Critical Review (50%)

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