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The Issue of Infertility and Sexual Function in Turkish Women

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Abstract The study was planned to evaluate the sexual function in infertile women. In the course of this study, 308 infertile and 308 fertile women were interviewed. Female Sexual Function Index was used to assess the relationship between infertility and female sexual function. The total FSFI score was 24.58 ± 5.45 in the infertile group versus 26.55 ($p < 0.01$) in the fertile control group. In the infertile group, 61.7% of the women had scores, which was accepted as high risk for female sexual dysfunction. The specific domains that appeared to be most impacted were desire, arousal and orgasm. The rate of women who had reported presence of a sexual problem in male partner were significantly higher in the infertile group ($p < 0.05$). The prevalence of sexual dysfunction in infertile women was higher than the fertile control group. Sexual dysfunction in infertile women was found to be associated with age, partner's age, duration of marriage, duration of infertility, and duration of treatment and frequency of intercourse.

Keywords Sexuality · Female sexual function index · Infertility · Women · Turkey

Introduction

Infertility is defined as the failure to achieve a pregnancy after 12 months of unprotected intercourse or the inability to continue pregnancy to a live birth [1]. It has been reported

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Table 3 Comparison of total FSFI and domain scores in infertile and fertile women

	Infertile group (n = 308) Mean ± SD		Fertile group (n = 308) Mean ± SD		t-Test	P
Desire	3.53	0.96	3.85	0.95	-4.14	0.000
Arousal	3.69	1.12	4.09	1.07	-4.53	0.000
Lubrication	4.52	1.09	4.95	0.96	-5.24	0.000
Orgasm	4.07	1.23	4.61	1.03	-5.95	0.000
Satisfaction	4.38	1.30	4.82	1.04	-4.58	0.000
Pain	4.37	1.29	4.61	1.35	-2.21	0.02
Total FSFI	24.58	5.45	26.95	4.69	-5.79	0.000

Student *t*-test

women diagnosed with mixed factor was found to be significantly lower than those who had unexplained factors ($f = 3.36$, $p = 0.02$). Women who reported having intercourse with the husband just for getting pregnant in the infertile group had lower total FSFI score (student $t = 2.71$, $p = 0.006$) and lower subscale scores for arousal ($t = 2.52$, $p = 0.01$), lubrication ($t = 2.85$, $p = 0.005$) and orgasm ($t = 2.32$, $p = 0.02$) domains. The relationship between total FSFI score and age, partner's age, duration of marriage and the frequency of intercourse was assessed by Pearson correlation test in infertile and fertile groups. Also, the relationship between the duration of infertility and duration of treatment was evaluated using Pearson correlation test in the infertile group (Table 4). The correlation between FSFI and women's age showed that, total FSFI score and subscale scores in all domains excluding orgasm and pain, were negatively affected by the increasing age in the infertile women, Increasing age in the male partner of the infertile women was found to be associated with lower total FSFI score and lower subscale scores in all domains except pain, while only satisfaction subscale scores was negatively affected by the increasing partner age in the control group. The total FSFI score and the subscale scores in all domains except pain decreased with the increasing duration of marriage in the infertile

Table 4 Evaluation of relationship between FSFI and factors affecting sexuality

	Desire <i>r</i>	Arousal <i>r</i>	Lubrication <i>r</i>	Orgasm <i>r</i>	Satisfaction <i>r</i>	Pain <i>r</i>	Total FSFI <i>r</i>
Infertile women							
Age	-0.13**	-0.13**	-0.21 *	-0.08	-0.17*	0.07	-0.13**
Partner's age	-0.13**	-0.16*	-0.20*	-0.14**	-0.18*	0.062	-0.15*
Duration of marriage	-0.24*	-0.30*	-0.30*	-0.20*	-0.29*	-0.02	-0.28*
Frequency of intercourse	0.28*	0.25*	0.15*	0.19*	0.23*	0.01	0.23*
Duration of infertility	-0.18*	-0.27*	-0.27*	-0.16*	-0.25*	-0.03	-0.24*
Duration of treatment	-0.15*	-0.18*	-0.18*	-0.13**	-0.19**	-0.02	-0.18**
Fertile women							
Age	-0.18*	-0.11**	-0.09	-0.05	-0.17	0.11	-0.10
Partner's age	0.09	0.05	0.03	0.10	0.12**	0.03	0.09
Duration of marriage	0.07	0.02	0.05	0.09	0.09	0.03	0.08
Frequency of intercourse	0.19*	0.18*	0.17*	0.15*	0.17*	0.04	0.19*

Pearson's correlation test, * $P < 0.01$, ** $P < 0.05$

group. On the other hand, total FSFI score and subscale scores in all domains were positively affected by the increasing frequency of intercourse per week in both groups. In the infertile group, total FSFI score and subscale scores in all domains except pain were found to be adversely affected by increasing duration of infertility and increasing duration of treatment (Table 4).

Discussion

Previous studies have reported that infertility caused sexual problems such as loss of sexual desire, decrease in frequency of sexual intercourse, pain during sexual intercourse and orgasmic difficulties in women [10, 11, 15–17, 21]. In the present study, female sexual dysfunction rate was found as 42.9% in the fertile control group and this finding is similar to the previous studies conducted in Turkey [17, 20, 22]. In this study, the rate of 61.7% was identified as the sexual dysfunction in infertile women's group. In Nelson et al.'s study, sexual dysfunction was reported as 26% among infertile women [15]. Similarly, in a study conducted in Turkey by Arslan et al., female sexual dysfunction rate was found 21% in 38 infertile couples [17]. However, Monga et al. reported that infertility did not affect women's sexual function in their study on 80 infertile couples [3]. The rate of sexual dysfunction in the present study was found higher than in other studies. This situation could be a result of the limited samples of previous studies. We believe that, conducting research in a large university hospital with 308 infertile patients applied from many cities all over Turkey, improved the reliability of our results in the present study.

FSFI subscale scores of desire, arousal and orgasm domains were found lower than the other subscale scores in the infertile group. The findings of the present study are similar to the results of studies by Audu, Nelson et al., Khademi et al., Jain et al. and Oguz [11, 15, 16, 18, 21]. Jain et al. also reported a decrease in sexual desire (28%) and orgasmic difficulties (14%) in infertile women [16]. In a small-scale case ($n = 30$) control ($n = 38$) study conducted in Turkey by Oguz, decrease in sexual desire has been found to be more common among infertile women compared to the fertile women [18]. In the present study, the frequency of intercourse per week was found to be significantly lower among infertile women compared to the fertile women. In addition, women who reported having intercourse with the husband just for getting pregnant in the infertile group (46.4%) had lower total FSFI score and lower subscale scores for arousal, lubrication and orgasm domains. In Dennerstein and Morse's study, 71% of infertile women reported that infertility decreased sexual enjoyment and caused sexual activity to become too mechanical and purposeful [23]. The results of the present study supported the same opinion that, sexual intercourse made compulsory at certain times and being only focused on conception caused the loss of naturalness in the relationship, lead to live sexuality as a forced mechanical task and adversely affected the sexual function of infertile women. Besides, infertile women may find sexual intercourse out of the ovulation time worthless because of having no hope for pregnancy [6, 14, 23]. In the infertile group of the present study, the rate of women who reported presence of a sexual problem in male partner was significantly higher than in the control group. Compared to the control group, women who had reported presence of the sexual problem in the male partner was found to have lower total FSFI score and lower subscale scores in all domains except pain in infertile women's group. Similarly, in Nelson et al. [15] and Shindel et al. [24] study, the presence of sexual problems in the male partner has been reported to adversely affect the sexual function of infertile women. Findings of the present study are parallel to the results of other studies [15, 24]. Infertile women with

mixed factors were determined to be more negatively impacted compared to women with unexplained factors. In Lee et al. study, factors that caused infertility have been reported to have no effect on sexual function of infertile women [25]. In the Turkish society, it is believed that the most important role of the women is being mother. The place of women in society and family is under the threat if they do not get this role [5, 12, 14]. Infertility problems in women with mixed factors require the treatment of both spouses. Negative thoughts of those women, such as their infertility problem may not be easily resolved and therefore, having children will be harder, and may adversely affect their sexual function.

The sexual desire, satisfaction and pain levels were decreased with the increasing age in women in the control group, while only satisfaction levels were decreased with the increasing age of the male partner and duration of marriage did not affect the sexual function. Increase in the age, partner's age, duration of marriage, duration of infertility and duration of treatment were associated with decrease in sexual desire, arousal, lubrication and satisfaction in the infertile group women, and sexual function was negatively affected in general, compared to the control group. Sexual function was positively affected in all domains by the increasing frequency of intercourse per week in both groups. Fertility of women decreases with age. Hopes to have a child reduce with the prolonged duration of infertility in women with infertility problems [5, 14, 18]. For instance, Nene et al. [26] reported a decrease in sexual function with the increasing duration of infertility in infertile couples. Similar to the literature, the results of this study demonstrated that, hopes to have children reduced with increased years of unsuccessful infertility treatment, and that sexual intercourse as an expression of love becomes a statement of failure and deficiency for infertile women [6, 12, 16, 23, 27].

In the present study, sexual dysfunction rate was found higher in the infertile group than the fertile control group. In the Turkish society, having children is an important status symbol for women to gain privilege and prestige. Having children brings approval and respect, especially in traditional families with non-working women. Women's education and economic freedom in Turkey are limited and women use their fertility to improve their social position. Once a couple could not have children, the first person generally to be accused in Turkey is the woman since children are born to women. Moreover, women who do not have children are looked down and stigmatized owing to their infertility. Even if infertility is caused by men, women hide this situation to protect the manliness proud of her husband, because of our patriarchal social structure. In addition, there is strong family pressure for making another marriage against men who are unable to bear children. These reasons make sexual activity an action of producing a child instead of having pleasure, in the eyes of infertile women [6, 12–14]. Being an infertile woman in Turkey bring many social challenges and also may adversely affect sexual function.

Conclusion

In the present study, female sexual dysfunction was found higher in the infertile group than the fertile control group. Female sexual dysfunction in infertile women was associated with age, partner's age, duration of marriage, duration of infertility, and duration of treatment and frequency of intercourse. This study contributes to the limited previous studies that evaluated sexual function in infertile women in Turkey. One must keep in mind that this case control study is limited to evaluation of only the sexual function in infertile women.

Further research on evaluation of psychosocial and cultural factors that may affect the sexual life of infertile women will be useful.

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