Depression and Sexual Dysfunction in Turkish Men Diagnosed With Infertility

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OBJECTIVE To investigate the effects of infertility on sexual functions and depression levels of Turkish men.

METHODS A total of 56 infertile men undergoing in vitro fertilization therapy and 48 fertile men, as the control group, were included in this prospective longitudinal study. The study data were collected using the International Index of Erectile Function 5 and 15 (IIEF-5 and IIEF-15), and the depression status of the interfile and control group participants was evaluated using Beck Depression Inventory. The data were analyzed using Statistical Package for Social Sciences (version 13.0) by chi-square and the Student *t* tests for statistical evaluations.

RESULTS Mild-to-moderate erectile dysfunction was detected in 85.9% of the patients in the infertile group and in all the control group participants according to IIEF-5 form, but this difference was not statistically significant. When the subparameters of erectile dysfunction were evaluated via IIEF-15, the infertile group's scores were observed to be significantly lower than those of the control group's in orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction domains. Based on Beck Depression Inventory, the current depression status of the infertile group was significantly worse than that of the control group.

CONCLUSION In this study, we determined that among Turkish men, being infertile did not cause significant impairment in erectile functions compared to the control group; however, it negatively affected subparameters of sexual functioning and we also determined that men who had infertility were feeling more depressed than the controls. UROLOGY 85: 1389–1393, 2015. © 2015 Elsevier Inc.

Infertility, although not apparent or classified as a life-threatening condition, is a health issue beyond a urologic or gynecologic problem, with biological, social, cultural, and psychological dimensions, affecting both individuals and the society.[1]

About 15% of the couples start to seek treatment when they cannot conceive within a year's time.[2] This rate varies between 10% and 20% in Turkey.[3] Infertility is an idiopathic condition that can be caused by either the male or the female partner or both parties. About 40% of infertility cases are male infertilities while 30%-40% do not have an apparent cause (idiopathic male infertility).[4,5] Congenital or acquired urogenital anomalies, cancers, urogenital infections, conditions increasing scrotal temperature such as varicocele, endocrine disorders, genetic anomalies, and immunologic factors can be listed among other causes.[5] It is known that infertility can be managed with more ease when one of the partners is fertile, and it leads to a more stressful condition when both partners of a couple are infertile.[6]

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Infertility diagnosis is known to cause psychological distress between couples.[7] Moreover, infertility can lead individuals to have a decline in self-confidence and self-esteem; they experience a pressure to manage the stress associated with treatment and inability to conceive despite a desire to do so. Infertility negatively affects the couple's relationship and often involves issues around sexual dissatisfaction.[7] Especially in case of idiopathic male or female infertility, having sexual intercourse with a goal of success in conceiving and the monotony it causes along with the associated sense of mission can lead to erectile dysfunctions among men.[8]

Various studies have been conducted to investigate the effects of infertility on marriage and sexuality. Some studies showed that couples experiencing infertility problems became more intimate.[9] However, other studies reported that this condition could damage couples' relationships and lead to sexual dissatisfaction.[7] Onat and Kizilkaya's[10] study with 58 primary infertile and 51 fertile couples from the Turkish society reported no significant difference between the 2 groups with respect to marital relationships and quality of life. In their study, no difference in marital relationships and quality of life was observed across the male and female sexes.[10]

There are also studies that investigated the effect of infertility and the administered therapies on anxiety and depression development. Balaban et al[4] described the stress levels of the procedures in in vitro fertilization

(IVF) treatments to be similar for both males and females. Zorn et al[11] reported that infertile men are more prone to depression and anxiety and to have less of masculine tendencies and self-esteem.

Addition of factors such as emotional burden, inability to accept, anger, and embarrassment toward the partner on top of the physiological problem (infertility) pose a problem for individuals who have difficulty accepting this condition. The study by Monga et al[12] defined infertility as an emotional condition that is hard to manage and a condition that affects marital functions and causes depression and anxiety.

Although there are studies on the effects of infertility on sexual lives and depression status of individuals in developed countries, there are very few studies on this matter in Turkey. Considering this, to evaluate erectile dysfunction and depression status of infertile Turkish men, we believe that our study will guide future, larger-scale studies on this topic.

METHODS

A total of 56 men aged 24-45 years were included in this prospective study who consented to participate, had primary male infertility diagnosis and a healthy partner, had ongoing IVF treatment at the IVF clinic between January 2011 and December 2013, and had undergone spermiogram test, hormone profiling, and other necessary urologic examinations. All patients met the following criteria: having had a treatment at an IVF clinic for at least 1 year, not having another chronic disease, and having had an active sexual life during the past 6 months. The control group consisted of 48 men aged 24-45 years, partners of healthy women who had given birth to healthy babies without a treatment and visited the gynecology clinic for a routine visit, and agreed to participate in the study. Participants in the control group had also met the criteria of not having another chronic disease and having an active sexual life during the past 6 months. Informed consent forms were obtained from participants in both the control and the patient groups. The mean ages of the participants were 33.9 ± 5.1 and 35.6 ± 3.7 years for the infertile and the control groups, respectively. Validated Turkish translation of the International Index of Erectile Function 5 and 15 (IIEF-5 and IIEF-15) forms were used to measure current erectile functions and the subdomains of sexual functioning in infertile and control group participants.[13] Current depression status of all participants in both control and patient groups was evaluated via the Beck Depression Inventory. The data were analyzed using Statistical Package for Social Sciences (version 13.0), using the chi-square and the Student *t* tests for statistical evaluations.

RESULTS

Among the infertile men participated in this study, 17 (30.4%) were administered microscopic testicular sperm extraction, 16 (28.6%) had microscopic varicocelectomy operation, and 2 (3.6%) were administered testicular sperm aspiration. Sexual and sociodemographic characteristics of the study participants are summarized in Table 1. According to this, infertile and control group participants were similar with respect to mean age and the age they had started to masturbate, whereas the control group participants were married for longer period of time and had a higher level of education. According to IIEF-5, 45 (84.9%) of infertile participants in our study had mild-to-moderate erectile dysfunction, whereas mild-to-moderate erectile dysfunction was detected in all the control group participants (100%). The mean ± standard deviation values for the erectile functioning in the infertile group were 12.9 ± 2.5 (range, 7-22), whereas it was 13.2 ± 0.88 (range, 12-16) in the control group. According to their erectile function scores (IIEF-5), no statistically significant difference was determined between the infertile and control groups ($P = .462$). In the infertile group, moderate erectile dysfunction was detected in 6 patients (10.7%) and severe erectile dysfunction was detected in 2 (3.57%). There were 3 patients (5.35%) who did not have erectile dysfunction. An evaluation of the sexual functioning subdomains of these patients via IIEF-15 showed that orgasmic function score was 8.4 ± 2.5 in the infertile group and 9.7 ± 0.7 in the control group, and the difference between the groups was statistically significant ($P = .002$). The mean sexual desire score was 7.4 ± 1.8 in the infertile group and 8.6 ± 1.4 in the control group with a statistically significant difference ($P = 0001$). In terms of intercourse satisfaction and overall satisfaction, the mean values were 7.6 ± 1.9 and 8.3 ± 2.0 in the infertile and 8.4 ± 0.7 and 9.2 ± 1.3 in the control groups, respectively. Both the intercourse satisfaction and the overall satisfaction were significantly less in the infertile group compared to the control group ($P = .011$ and $P = .004$). Mean IIEF-15 scores for the infertile and the control groups were 45.7 ± 7.5 and 50 0.4 ± 3.2, respectively, with significantly higher values in the control group ($P = .001$). Table 2 co the participants in the infertile and the control groups by their sexual functioning status.

Table 1. Sexual and sociodemographic characteristics of the infertile and control groups

	Infertile Group (n = 56)		Control Group (n = 48)				
Characteristic	Mean	SD	Mean	SD	*t*	*df*	*P*
Age (y)	33.9	5.1	35.6	3.7	1.91	101	.059
Education level (y)	9.3	3.3	12.3	2.5	4.98	102	**.001**
Period of marriage (y)	8.1	4.8	11.3	5.1	3.18	102	**.002**
Age of masturbation (y)	14.9	2.4	14.7	1.1	0.65	92	.523

df, degree of freedom; SD, standard derivation.
Bold *P* values indicate $P < .05$.

The evaluation of the depression status of participants in both groups yielded mean a Beck Depression Inventory score of 7.3 ± 5.7 in the infertile group and 0.5 ± 1.3 in the control group (Table 3). This result showed that the participants in the infertile group felt significantly more depressed than those in the control group ($P < .001$).

COMMENT

Infertility and associated treatments constitute a highly stressful period in lives of couples. Although recent