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CLINICAL ARTICLE

Quality of life of infertile Tunisian couples and differences according to gender

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ABSTRACT

Objective: To compare quality-of-life gender differences within infertile couples from Tunisia and between infertile couples and controls. *Methods:* The present case–control study included 100 couples with primary infertility who, during 2009, underwent assisted reproductive technology at Farhat Hached Hospital in Sousse, Tunisia, and 100 control couples. The 36-item Short-Form Health Survey (SF-36) was administered to assess quality of life. *Results:* Compared with male controls, men in the infertility group had lower scores in the mental dimension ($P = 0.020$), social functioning ($P = 0.007$), and role–emotional ($P < 0.001$) categories of the SF-36. Women in the infertility group had lower mental and physical dimension scores ($P < 0.001$) and lower vitality ($P = 0.022$), social functioning ($P < 0.001$), role–emotional ($P < 0.001$), and mental health ($P < 0.001$) scores than female controls. Within infertile couples, female partners had lower total ($P = 0.01$) and mental dimension ($P < 0.001$) scores than their spouses. Delay of the first consultation was correlated with bodily pain, vitality, and mental health among women in the infertility group. *Conclusion:* Women in infertile couples had a lower quality of life than their spouses, and infertile couples had a lower quality of life than controls. These findings confirm the need for psychological support for infertile couples.

1. Introduction

Infertility, defined as "the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse" [1], is a condition that has biopsychosocial repercussions for both partners in a couple, with consequences including psychiatric problems and marital conflicts [2,3]. Men and women undergoing assisted reproductive technology (ART) experience a number of stresses that are related both to the experience of infertility and to its treatment [4,5].

Most studies [6,7] that have evaluated the quality of life among infertile couples report a stronger quality-of-life impairment for women than for men. Several studies [7–11] have investigated the quality of life of infertile couples undergoing ART. However, case–control studies in this context are sparse, and most studies have assessed gender differences among participants from high-resource countries. There is, therefore, a need for new case–control studies focusing on the quality of life of infertile couples from other sociocultural backgrounds.

The aims of the present study were to assess the quality of life of infertile couples in Tunisia, to compare it with that of fertile controls, and to assess gender differences in terms of quality of life within the infertile couples.

2. Materials and methods

The present case–control study included 100 couples with primary infertility who underwent ART at the Unit of Reproductive Medicine at Farhat Hached Hospital in Sousse, Tunisia, between January 1 and May 31, 2009. The recruitment process has been described previously [3]. In addition, a control group of 100 couples was recruited; the couples were matched for age, place of residence, educational level, and duration of marriage. All couples in the control group had at least 1 child and no known history of infertility. They were enrolled between February 1 and June 30, 2009, during a vaccination visit for one of their children at an "El Okbi" public child health center in Sousse, Tunisia, at least 6 months since the birth of the last child. The Institutional Review Board Committee approved the protocol. All participants gave informed consent after the procedure had been fully explained.

The quality of life in the 2 groups was assessed using the 36-item Medical Outcomes Study Short-Form Health Survey (SF-36), which is a generic questionnaire that measures the quality of life in 2 major health dimensions (mental and physical health). The total score ranges from 0 to 100. Higher scores indicate a better quality of life. The questionnaire was self-administered.

The statistical analysis was performed using SPSS version 11.0 (IBM, Armonk, NY, USA). Statistical comparisons were made between infertile men and women, and between cases and controls. The *t* test was used to compare continuous variables; the χ^2 test was used to

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compare frequencies between groups, and low values were compared by the Fisher exact test. Pearson product–moment correlation coefficients were calculated to examine the relationships between quality-of-life measures and clinical variables. $P < 0.05$ was considered statistically significant.

3. Results

The sociodemographic characteristics of the 2 groups are presented in Table 1. Male factors of infertility were found in 50 (50%) infertile couples, female factors in 21 (21%), both male and female factors in 15 (15%), and the factors were unknown in 14 (14%). The mean duration of infertility was 5.19 ± 4.62 years, and the mean time since first medical advice was 1.27 ± 1.03 years. Overall, 87 (87.5%) couples thought that the fertility investigations were exhausting and tiring, with no significant difference between women and men.

In the infertility group, 62 (62%) women had previously spoken of their difficulties related to infertility with their family members or friends, compared with 36 (36%) men ($P < 0.001$). Overall, 77 (77%) women and 48 (48%) men within infertile couples believed that psychological support would help them cope better ($P < 0.001$).

Compared with men in the control group, men in the infertility group had a lower summary score in the mental dimension of the SF-36 (73.25 ± 17.53 versus 78.16 ± 11.37; $P = 0.020$), and lower scores in the domains of social functioning ($P = 0.007$) and role–emotional ($P < 0.001$) (Table 2). Women in the infertility group had a lower score in both the mental and the physical dimension ($P < 0.001$ for both comparisons) than women in the control group. They also had lower vitality ($P = 0.022$), social functioning ($P < 0.001$), role–emotional ($P < 0.001$), and mental health ($P < 0.001$) scores than controls.

Within infertile couples, 37 (18.5%) individuals (22 women and 15 men) had an impaired quality of life, with no significant gender difference. In particular, women had a lower total score ($P = 0.01$) and a lower mental summary score ($P < 0.001$) on the SF-36 than men (Table 2).

Among women in the infertility group, delay of the first consultation was positively correlated with scores in the SF-36 domains of bodily pain ($r = 0.222$, $P = 0.026$), vitality ($r = 0.244$, $P = 0.014$), and mental health ($r = 0.202$, $P = 0.044$) (Table 3). For infertile men, no correlations were found between infertility-related parameters and measures of quality of life.

4. Discussion

In the present study, female partners in infertile couples had lower quality-of-life scores than male partners, and infertile couples had a stronger impairment of their quality of life than controls. The study compared infertile and fertile couples from a different sociocultural background than most previous studies [7–11]. The focus was exclusively on primary infertility because secondary infertility has fewer psychological effects [12,13].

Male factors of infertility were found in 50% of the infertile couples in the present study, which is consistent with the results from other authors [14–16] who also found high rates of male infertility. In fact, the rate of male infertility is increasing in the Middle East, which could be attributable to genetic or reproductive disorders and war exposure [16].

The mean duration of infertility in the present study was 5.19 ± 4.62 years. In the literature, this duration varies from 1 to 5 years [9,17].

The majority (87.5%) of the infertile couples found the fertility investigations tiring, with no significant difference between women and men. Several studies [18,19] have focused on the physical aspects of infertility treatment that are experienced as stressful, including daily injections, blood samples, ultrasound monitoring, and semen analysis. In addition, people affected by infertility may carry a heavy emotional burden, given that infertility treatment can be a long and difficult process with an uncertain outcome [20]. This psychological experience, characterized by anxious waiting, doubts, and tension, is often considered by couples to be more distressing than the physical burden [21].

In the present study, the couples in the case and control groups were matched for age, educational level, length of marriage, and place of residence. A comparison of other characteristics showed that women in the infertility group were more often occupationally active than women in the control group. This could result from selection bias. The cost of ART puts financial constraints on couples [22], even though the treatment is partially funded by health insurance in Tunisia. Working women have more financial resources and, therefore, easier access to care. The fact that working women have easier access to care is in line with the findings from Khayata et al. [10] and underscores the financial burden associated with infertility treatment in the Middle East.

There were no significant differences between the 2 groups in terms of personal or family history of psychiatric morbidity.

Table 1
Demographic and clinical data for infertile couples and controls.

Variable		Infertile couples		Control couples		*P* value		
		Women (n = 100)	Men (n = 100)	Women (n = 100)	Men (n = 100)	Men vs women (infertile)	Women (infertile vs controls)	Men (infertile vs controls)
Age		32.69 ± 4.91	38.74 ± 5.87	31.87 ± 4.87	37.57 ± 5.72	<0.001	0.73	0.20
Education level	Illiterate	8 (8)	1 (1)	5 (5)	1 (1)	0.057	0.75	0.82
	Primary	38 (38)	40 (40)	40 (40)	34 (34)			
	Secondary	29 (29)	39 (39)	26 (26)	45 (45)			
	University	25 (25)	20 (20)	29 (29)	20 (20)			
Occupation	No occupation	56 (56)	1 (1)	66 (66)	0 (0)	<0.001	0.04	0.28
	Laborer	23 (23)	65 (65)	9 (9)	65 (65)			
	Office worker	14 (14)	21 (21)	20 (20)	28 (28)			
	Executive officials	7 (7)	13 (13)	5 (5)	7 (7)			
Location	Rural	43 (43)	43 (43)	43 (43)	43 (43)	0.55	0.55	0.55
	Urban	57 (57)	57 (57)	57 (57)	57 (57)			
Family history of psychiatric disorders	Depressive disorder	6 (6)	4 (4)	3 (3)	2 (2)	0.57	0.69	0.70
	Anxiety disorder	0 (0)	1 (1)	1 (1)	0 (0)			
	Schizophrenia	6 (6)	3 (3)	6 (6)	4 (4)			
	Other	2 (2)	1 (1)	3 (3)	2 (2)			
Personal history of somatic disorders		16 (16)	14 (14)	8 (8)	16 (16)	0.42	0.06	0.42
Personal history of psychiatric disorders		1 (1)	5 (5)	2 (2)	3 (3)	0.057	0.50	0.24

[a]Values are given as mean ± SD or number (percentage).