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## Gynecology

# Assessing factors associated with infertility using a couple-based approach

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Infertility is defined as failure to achieve clinical pregnancy after 12 months of regular sexual intercourse.<sup>1</sup> Emotional stress related to infertility has been shown to impair quality of life (QoL) and could play an important role in successful infertility treatment.<sup>2</sup> To understand the burden of emotional stress, the QoL of couples experiencing infertility was examined from a dyadic perspective, and the factors affecting the QoL of men and women were evaluated comparatively.

The present descriptive study was conducted at Pamukkale University Medical School, Denizli, Turkey, between January 1, 2014 and December 31, 2014. The study institution's institutional review board provided ethical approval prior to data collection and informed consent was obtained from all participants. A structured questionnaire was used to obtain demographic information known to be relevant based on previous study data.<sup>3</sup> The FertiQoL, an internationally developed instrument for measuring infertility-specific QoL in people experiencing infertility,<sup>4</sup> was used to evaluate the QoL of participants, with higher scores for any subdomain indicating better QoL. FertiQoL scores were considered to be dependent variables in the present study, with all other parameters considered independent variables.

Statistical analyses were performed using SPSS version 16.0 (SPSS, Chicago, IL, USA). A two-way analysis of variance test was used to examine the influence of different categorical independent variables on FertiQoL scores, with the results stratified by gender;  $P < 0.05$  was considered statistically significant.

In total, 202 couples were enrolled in the present study. The age range was 24–35 years for female participants and 28–39 years for male participants. The mean  $\pm$  SD duration of infertility experienced by participants was  $5.0 \pm 4.9$  years. The incidence of receiving psychological support (34 of 200 [17.0%] women responding vs 13 of 197 [6.6%] men responding;  $P = 0.001$ ) and desiring psychological support (33 of 202 [16.3%] women responding vs 13 of 198 [6.6%] men responding;  $P = 0.003$ ) were significantly higher among female participants, and emotional ( $P = 0.001$ ) and mind/body ( $P = 0.006$ ) FertiQoL scores were significantly lower among female participants. Two-way analysis of variance tests were used to analyze the effects of age, education, employment status, health insurance, income level, receiving psychological support, desiring psychological support, and infertility cause on the FertiQoL scores; the results were stratified by gender (Table 1). Higher emotional and mind/body FertiQoL subscale scores were recorded among male participants who were in employment in comparison with female participants ( $P = 0.003$ ) and compared with male participants who were unemployed ( $P = 0.005$ ).

The present results demonstrated that, among couples experiencing infertility, QoL was higher in male participants compared with their partners; however, being unemployed was associated with decreased QoL among male participants. Female participants were more likely to utilize psychological support and to report desiring psychological support. Consequently, individualized counselling methods could be applied to individuals among couples experiencing infertility.



**TABLE 1** Comparison of the FertiQoL subscale scores.<sup>a</sup>

Demographic variable	FertiQoL emotional subscale scores			FertiQoL mind/body subscale scores			FertiQoL relational subscale scores			FertiQoL social subscale scores		
	Female	Male	F/p	Female	Male	F/p	Female	Male	F/p	Female	Male	F/p
Age, y												
<35	55.0±23.0	65.6±20.2	3.615	68.3±24.2	76.3±20.7	2.372	78.0±20.7	79.6±19.3	1.014	57.1±14.6	56.8±12.8	3.046
≥35	64.0±21.9	65.4±19.0	0.058	74.8±19.8	75.0±21.2	0.124	78.5±17.3	75.6±17.8	0.315	68.2±9.8	60.0±12.7	0.082
Education, y												
<9	56.8±24.1	62.4±17.9	0.520	68.0±23.7	74.1±21.7	0.011	76.5±18.4	78.7±22.1	0.614	60.7±16.1	59.2±12.3	0.806
9–11	55.2±21.9	65.6±20.5	0.595	69.1±22.9	75.5±20.4	0.989	78.1±22.3	78.1±17.1	0.542	56.4±13.6	56.6±12.8	0.448
≥11	62.9±24.4	71.5±20.1	Ref.	74.1±25.2	79.7±20.1	Ref.	81.0±15.3	76.9±16.3	Ref.	65.0±15.4	6.9±15.0	Ref.
Employment status												
Employed	55.0±23.7	67.1±18.8	8.997	67.1±25.0	77.2±20.4	7.900	76.0±25.0	78.4±17.2	1.177	55.2±16.5	58.1±12.5	3.178
Unemployed	57.6±22.8	51.7±22.8	0.003	70.6±22.9	63.5±20.8	0.005	75.4±29.3	75.4±29.3	0.279	59.7±13.7	52.8±16.0	0.076
Health insurance												
Yes	57.0±22.7	66.0±20.0	0.543	68.9±24.0	76.2±20.6	2.650	77.7±20.1	78.1±19.0	0.312	57.6±15.0	57.5±13.0	0.011
No	55.8±25.5	59.0±11.6	0.462	75.2±19.4	69.6±23.9	0.104	81.3±19.5	77.8±15.4	0.577	62.9±11.4	63.5±4.0	0.917
Socioeconomic status												
Low	52.2±22.1	61.8±21.6	0.093	68.9±23.7	74.2±24.2	0.204	81.5±28.6	82.8±25.5	0.727	54.9±15.9	57.9±10.9	1.053
Middle	58.1±22.6	66.1±18.1	0.911	70.8±22.8	76.6±19.5	0.815	77.1±19.9	76.4±18.6	0.484	60.5±13.0	57.8±13.2	0.351
High	58.1±25.6	68.4±24.2	Ref.	66.1±26.1	75.3±21.1	Ref.	77.3±16.2	78.5±16.7	Ref.	55.7±19.2	56.4±16.6	Ref.
Receiving psychologic support												
Yes	60.5±23.0	64.1±21.8	0.496	67.4±27.3	66.3±25.1	0.804	72.3±21.7	67.9±20.4	0.269	57.9±14.0	61.1±12.0	0.481
No	56.1±23.0	64.9±19.2	0.482	70.2±22.7	76.0±20.5	0.371	79.2±19.6	78.3±18.5	0.604	58.6±14.8	57.3±12.9	0.489
Desire for psychological support												
Present	40.2±23.0	51.0±23.6	0.379	53.5±27.0	66.3±23.2	1.347	72.5±34.5	78.2±21.3	0.923	48.7±16.8	51.7±10.2	0.750
Absent	60.4±21.6	66.7±19.2	0.538	72.6±21.2	76.8±20.6	0.247	79.0±16.1	78.2±18.6	0.337	60.1±13.7	58.2±13.0	0.387
Cause of infertility												
Female	51.8±24.3	63.6±18.4		62.0±27.0	73.8±21.0		76.7±18.1	77.8±17.6		56.6±15.7	56.3±13.2	
Male	59.0±21.1	61.5±16.5	0.723	72.8±19.0	70.4±23.5	1.503	78.3±18.4	77.4±16.6	0.453	59.6±10.6	56.7±7.9	1.066
Both	59.1±19.2	71.7±19.7	0.577	67.7±19.1	79.3±22.2	0.201	80.4±13.7	76.8±18.0	0.770	56.4±15.7	65.2±8.6	0.374
Unknown	54.5±24.5	65.5±21.6	Ref.	68.1±24.4	75.1±20.3	Ref.	78.0±28.1	75.9±19.3	Ref.	56.4±21.1	58.3±11.5	Ref.
Duration of infertility, y												
<5	56.0±23.2	66.9±20.3	1.974	69.7±25.0	78.8±20.1	3.271	79.3±17.8	81.1±17.9	1.640	59.5±14.3	57.9±12.9	0.735
≥5	58.4±22.9	63.0±18.4	0.161	69.5±20.9	70.4±21.2	0.071	76.0±23.4	72.6±19.2	0.201	54.8±15.2	56.9±12.8	0.092

F/p, *F* statistic/*P* value.

<sup>a</sup>Values are given as mean±SD unless indicated otherwise.



## AUTHOR CONTRIBUTIONS

AK contributed to study design and planning; data collection, analysis, and interpretation; and manuscript writing and revision. ÖD contributed to data collection, and drafting and revising the manuscript. SS and NK contributed to the development and management of the study database; data interpretation; and manuscript revision. SG contributed to data collection and manuscript writing. All authors approved the final manuscript.

## CONFLICT OF INTEREST

The authors have no conflicts of interest.

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