

The Fertility Quality of Life (FertiQoL) Questionnaire in Pakistani Infertile Women

Sughra Abbasi¹, Rehana Kousar²

ABSTRACT:

Objective: To characterize the fertility quality of life (QoL) in Pakistani infertile women using FertiQoL questionnaire tool and establish a reference level of QoL for clinical applications and future studies.

Materials and Methods: The cross-sectional survey was conducted from May to October 2015 at the Department of Baqai Institute of Reproductive Sciences (BIRDS) of Baqai Medical University. Hundred married women diagnosed with primary or secondary infertility, aged 18 years or above, literate and those who could communicate were enrolled in this study. The study participants also completed the Fertility Quality of Life Questionnaire (FertiQoL), a disease specific validated tool to measure quality of Life. SPSS version 20.0 was used for statistical analyses.

Results: Seventy percent women were of 31-40 years, age at marriage less than 30 years (69%), educational qualification of bachelors (38%), unemployed (82%) and duration of infertility less than five years (76%). Primary infertility was predominant with 78%. The women who completed the FertiQoL had Mean (SD) for Core FertiQoL and treatment FertiQoL as 52.17 (13.13) and 54.25 (11.23) respectively. Among the subscales of Core FertiQoL the lowest mean scores for Emotional, Mind/ Body, Relational and Social were Mean (SD) as 53.30 (15.23), 50.67 (19.28), 47.34 (12.62) and 57.38 (11.23). The Mean (SD) for treatment FertiQoL was 54.25 (11.23) with Mean (SD) for Environment and Tolerability were 49.13 (9.64) and 59.37 (16.87), respectively.

Conclusion: The disease specific quality of life assessment tool Ferti QoL objectively measures the quality of life as well as its various domains, thus providing a more detailed and useful information for treatment.

Keywords: Females, FertiQoL, Infertility, Pakistani, quality of life

INTRODUCTION:

Infertility is defined as 'inability or failure of the couple to conceive for six months (women aged = 35 years) or 12 months (women aged < 35 years).¹ Infertility is a complex problem having both physiological and psychological aspects. Studies conducted to identify the prevalence of infertility have reported the prevalence rates from 9%-12%.^{2,3,4} In the United States² the prevalence of infertility was identified as 12%, 9% in United Kingdom,³ and 12% in Portugal.⁴ It is a significant health problem which is treatable, but only every second infertile couple acquires medical help.⁴ In many societies, inability to conceive has been considered humiliating, and is considered a crisis associated with various psychological, biological, cultural, ethical and economical consequences.

Female infertility has negative consequences on the quality of life of the suffering women. The systemic review reported that quality of life among women suffering from infertility was severely impaired.⁵ Evidences from the previous psychological studies conducted have reported that infertility could result in

both emotional and psychological stress, thus having a negative consequence over the quality of life.⁶ Moreover, emotional stress which is one of the predictors of infertility; is also a factor responsible for the pre-mature dropout from treatment of infertility.⁷ Thus, for improved clinical outcomes in these infertile women, integrating QoL assessment should become standard of care. The World Health Organization (WHO) has defined Quality of Life⁸ as "individual's perceptions of their position of life in the context of culture and value systems in which they live in." There are a number of non-specific tools available to assess the QoL such as the World Health Organization brief quality of Life Questionnaire (WHO-BREF) and Health Survey Short Form (SF-36). But there was a need for fertility specific QoL assessment. The FertiQoL is a disease-specific QoL scale for infertility that was developed by Boivin to measure fertility problems in both men and women. It is a reliable scale for measuring QoL in patients with infertility.⁹ Though there have been studies reporting a variable degree of Quality of Life among different region but very little is known regarding the Quality of Life of infertile Pakistani women. To the best of our knowledge there was no published study regarding the general QoL among women with infertility in Pakistan. More importantly, this study utilizes the FertiQoL which is a disease specific tool with better validity and reliability for the assessment of quality of Life among infertile women. The aim of this study was to assess the Quality of Life among women experiencing infertility and provide clinical evidence for the need of assessment and counseling for Quality of Life.

MATERIALS AND METHODS:

The cross-sectional study was conducted from May 2015 and October 2015 at the Department of Baqai

✉ **Dr. Sughra Abbasi**

Assistant Professor
Consultant Gynecologist
Baqai Institute of Reproductive Sciences (BIRDS)
Baqai University Hospital
Karachi
E-mail: drsughra33@yahoo.com

✉ **Dr. Rehana Kousar**

Assistant Professor
Department of Biological Sciences
LEJ campus
Karachi

Received: 10-05-2016

Revised: 15-06-2016

Accepted: 17-06-2016

Institute of Reproductive Sciences (BIRDS) Baqai Medical University. The inclusion criteria for recruitment in this study were married women diagnosed with infertility, aged 18 years or above, literate, those who could communicate and demonstrated willingness to voluntarily complete a multi-item survey. Hundred women with primary or secondary infertility and currently on treatment for infertility were enrolled in this study. The local Ethics Committee of Baqai University approved this study. Women who satisfied the inclusion criteria were invited to participate in this study. The aims of the study were comprehensively explained by the researcher to the participants who volunteered to be the part of the study prior to enrolment in the study. Written informed consent was obtained from all study participants at the beginning of the study. Importantly, confidentiality and anonymity of the participant's responses were maintained throughout the research. A data collection form was developed by the researchers and all demographic and clinical data obtained from the participants were recorded in that questionnaire. In the questionnaire, information on the following variables was collected: age, age at time of marriage, education, employment, duration of infertility and infertility type (primary and secondary). The study participants also completed the Fertility Quality of Life Questionnaire (FertiQoL), a disease specific validated tool to measure quality of Life.

The FertiQoL is a validated tool to measure the quality of life among infertile persons. It is a self-reported questionnaire developed by the researchers and clinicians of European Society of Human Reproduction and the American Society of Reproductive Medicine (ASRM). The FertiQoL tool consisted of two modules; the core FertiQoL module and an Optional Treatment Module. The core FertiQoL module consisted of 24 items while there were 10 items in the Treatment FertiQoL module. The 24 items of the Core FertiQoL module are characterized in four domains that are emotional (evaluates the impact of infertility on emotions, such as sadness, resentment, or grief), cognitive and physical (influence of infertility on physical health, cognition, and behavior), relational (impact of infertility on partnership) and social (impact of infertility on social inclusion, expectation and support) domains. The optional treatment module of FertiQoL consisted of two domains that is to assess environment and treatment tolerability for infertility. All items in the FertiQoL tool (both core and optional) are rated from 0 to 4. The scores of all these items are computed and transformed in the range of 0 -100. The higher score on the FertiQoL demonstrates the better quality of life while lower scores are indicators of poor quality of life among infertile population. The FertiQoL tool has been translated into more than 20 languages, including Urdu. In this study the printed Urdu translated version of FertiQoL available on website (<http://www.fertiqol.org>) was used.

Statistical Analysis: SPSS 20.0 statistical software (IBM SPSS Inc., Chicago, IL, USA) was used in the statistical analyses. Questions with missing responses were excluded from analysis. Categorical variables were presented as number (percentage) and quantitative variables as mean \pm standard deviation.

RESULTS:

One hundred females with either primary or secondary infertility completed the questionnaire for demographics and FertiQoL. Majority of women, seventy percent were of the age 31-40 years. Sixty nine percent of women married at age less than 30 years. Thirty eight percent of women had attained educational degree of bachelors, while thirty four percent had education qualification of intermediate or less. Majority (82%) of women enrolled in this study were unemployed. Majority, seventy six percent of women had duration of infertility less than five years. Among the women enrolled in this study, primary infertility was predominant with seventy eight percent. The characteristics of women are described in Table 1.

The women who completed the Ferti QoL had Mean (SD) for Core FertiQoL and treatment Ferti QoL as 52.17 (13.13) and 54.25 (11.23) respectively. The subscales of Core FertiQoL i.e. Emotional, Mind/ Body, Relational and Social had Mean (SD) as 53.30 (15.23), 50.67 (19.28), 47.34 (12.62) and 57.38 (11.23). The Mean (SD) for treatment FertiQoL was 54.25 (11.23) with higher mean scores for its subscale Tolerability compared to Environment. The Mean (SD) for Environment and Tolerability were 49.13 (9.64) and 59.37 (16.87), respectively. The Mean (SD) for FertiQoL scale is given in Table 2.

Table: 1
Characteristics of women with infertility

Characteristics	Mean \pm SD or n (%) (N = 100)
Age (years)	
< 30	70 (70)
31 to 40	16 (16)
> 41	14 (14)
Age at Marriage (years)	
< 30	69 (69)
31 to 40	30 (30)
> 41	1 (1)
Education	
Intermediate or less	34 (34)
Bachelors	38 (38)
Masters or above	28 (28)
Employment Status	
Employed	18 (18)
Unemployed	82 (82)
Duration of infertility	
< 5 years	76 (76)
> 5 years	24 (24)
Infertility Type	
Primary Infertility	78 (78)
Secondary Infertility	22 (22)

Table: 2
FertiQoL Scores

FertiQoL (Scores)	Mean \pm SD
Emotional	53.30 \pm 15.23
Mind/ Body (Cognitive & Physical)	50.67 \pm 19.28
Relational	47.34 \pm 12.62
Social	57.38 \pm 11.23
Environment	49.13 \pm 9.65
Tolerability	59.37 \pm 16.87
Core FertiQoL	52.17 \pm 13.13
Treatment FertiQoL	54.25 \pm 11.23

DISCUSSION:

The study investigated the quality of life among women with primary or secondary infertility. There has been paucity of available evidences on the quality of life employing different measurement tools. Most studies utilize WHO brief quality of life questionnaire or SF-36, but in this study, FertiQoL a reliable and sensitive measurement tool of quality of life in infertility was utilized. The recent report published by Aarts has reported that FertiQoL is a valuable tool for evaluation of Quality of Life for infertile couples because of its precision and disease specific measurement¹⁰. As FertiQoL is not a tool with the purpose of identifying psychopathology, thus no definite cut-off values are available. Availability of such cut-off scores would have helped in identification of those in need of intensive attention and counseling. Similar findings are documented by other studies^{11,12,13,14}. In the current study conducted, the mean core and treatment FertiQoL were around 52 and 54 respectively. Among the Core FertiQoL subscale the lowest means were for relational around 47, followed by physical domain that was 51. The absolute scores for all four domains of Core FertiQoL in this study were lower compared to the scores presented in the developmental study of FertiQoL^{15,16,17,18,19}. The study conducted in Taiwan reported core and treatment FertiQoL scores of 54 and 56 which were comparatively higher than what identified in our study^{15,20,21,22}. The results of this present study also indicated that women with infertility in Pakistani demographics experienced higher level of relational problems, emotional stress and poor physical health status. The findings correspond with the study conducted in Iran reporting a higher depression rate²⁰. The higher level of depression and increased depression rate among infertile women can be accounted due to lack of support from spouse and family with increased feeling of stress^{23,24}.

The lower scores in our study corresponding with poor quality of life can be on account of the reason that lesser proportion of females in our study were employed compared to the studies mentioned above. Moreover, the educational status and socio economic status was lower for women with infertility in our study. Importantly, these women were currently on treatment, and the treatment cost may have placed a financial burden over them. The comparative findings of both the studies mentioned above were from developed countries, with participants having higher educational level, financially

stable with greater proportion employed. The lower score of quality of life apprehending the more adverse quality of life among Pakistani women can be accounted due to the reasons of economic insufficiency, lack of support from spouse because of stringent family belongings, and non-engagement with productive activities that is job.

This was the first study conducted in Pakistan with the use of validated FertiQoL Questionnaire. The findings of this study could serve as reference for managing psychological and physical impact of infertility among women. This could also serve as a reference for monitoring the changing quality of life among these women across the course of treatment. The identification of the quality of life should guide the clinicians to implement counseling interventions. Such counseling could lead to improving the quality of life, as well as increased pregnancy rates in infertile women¹⁴. The integrated approach, where the FertiQoL tool is being utilized in the treatment of infertility, with the counseling sessions would become more efficient and focused, therefore increasing the probability of success of the treatment²⁵.

The study had few limitations. This was a single centre study. To have more generalizable results a multi-centre study with greater sample should be planned in future. Future studies focusing on determining various factors associated with the Quality of Life in infertility with a similar approach in this study will help to develop a thorough approach for clinical practice.

CONCLUSION:

This study gives baseline values for the Quality of life among Pakistani women with infertility, using a disease specific quality of life assessment tool FertiQoL. The tool objectively measures the quality of life as well as its various domains, thus providing more detailed and useful information for treatment. Thus, more specific counseling methods could be used to improve the treatment of infertility.

REFERENCES:

1. Zegers-Hochschild F, Adamson G D, de Mouzon J, Ishihara O, Mansour R, Nygren K, et al. The international committee for monitoring assisted reproductive technology (ICMART) and the world health organization (WHO) revised glossary on ART terminology, 2009. Human Reproduction, dep 343.
2. Louis J F, Thoma M E, Sørensen DN, McLain A C, King, R B, Sundaram R et al. The prevalence of couple infertility in the United States from a male perspective: evidence from a nationally representative sample. *Andrology* 2013;1(5), 741-8.
3. Boivin J, Bunting L, Collins J.A, Nygren K G. International estimates of infertility prevalence and treatment-seeking: potential need and demand for infertility medical care. *Human reproduction* 2007; 22(6): 1506-12.
4. Soares S, Rodrigues T, Barros, H. Infertility prevalence in the city of Porto. *Acta Médica Portuguesa* 2011;24(5): 699-706.
5. Chachamovich J R, Chachamovich E, Ezer H, Fleck M P, Knauth D, Passos E P. Investigating quality of life

- and health-related quality of life in infertility: a systematic review. *Journal of Psychosomatic Obstetrics & Gynecology* 2010;31(2), 101-10.
6. Schmidt L. Psychosocial burden of infertility and assisted reproduction. *The Lancet* 2006;367(9508): 379-80.
 7. Campagne D M. Should fertilization treatment start with reducing stress? *Human Reproduction* 2006;21(7): 1651-8
 8. TWHOQoLAG-WHO QOL. Position paper from the World Health Organisation of life Assessment. *Soc Sci Med* 1995; 41: 1403-9.
 9. Boivin J, Takefman, J, Braverman A. The fertility quality of life (FertiQoL) tool: development and general psychometric properties. *Fertility and sterility*2011; 96(2): 409-15.
 10. Aarts JW , van Empe IWl, Boivin J, Nelen W L, Kremer J A, Verhaak C M. Relationship between quality of life and distress in infertility: a validation study of the Dutch FertiQoL. *Hum Reprod* 26 2011;26:1112-8.
 11. Klemetti R, Raitanen J, Sihyo S, Saarni S, Koponen P. Infertility, mental disorders and well-being-a nationwide survey. *Acta Obstet Gynecol Scand* 2010;89:677-82.
 12. Luckett T, King M, Butow P, Friedlander M, Paris T. Assessing health-related quality of life in gynecologic oncology. A systemic review of questionnaires and their ability to detect clinically important differences and change. *Int J Gynecol Cancer*2010;20:664-84.
 13. vanEmpel IW, Hermens RP, Akkermans RP, Hollander KW, Nelen WL, Kremer JA. Organizational determinants for patient-centered fertility care: a multilevel analysis. *Fertil Steril* 2010a;95:513-9.
 14. vanEmpel IW, Aarts JW, Cohlen B, Laven J, Huppelschoten D, Nelen WL, Kremer JA. Measuring patient centredness, the neglected outcome in fertility care: a random multicentre validation study. *Hum Reprod* 2010 b;25:2516-26.
 15. Hsu P Y, Lin MW, Hwang J L, Lee M S, Wu M H. The fertility quality of life (FertiQoL) questionnaire in Taiwanese infertile couples. *Taiwanese Journal of Obstetrics and Gynecology*2013; 52(2), 204-9.
 16. Huppelschoten AG, van Dongen AJCM, Verhaak CM, Smeenk MJM, Kremer JAM, Nelen WLD. Differences in quality of life and emotional status between infertile women and their partners. *Hum Reprod* 2013;28(8):2168-76. doi:10.1093/humrep/det239.
 17. Karabulut A, Ozkan S, Oguz N. Predictors of fertility quality of life (FertiQoL) in infertile women: analysis of confounding factors. *Eur J Obstet Gynecol Reprod Biol* 2013;170(1):193-7.
 18. Heredia M, Tenias J, Rocio R, Amparo F, Calleja M, Valenzuela J. Quality of life and predictive factors in patients undergoing assisted reproduction techniques. *Eur J Obstet Gynecol Reprod Biol* 2013;167(2):176-80.
 19. Cserepes R, Korösi T, Bugán A. Characteristics of infertility specific quality of life in Hungarian couples. *Orv Hetil* 2014;155(20):783-8.
 20. Ashkani H, Akbari A, Heydari S T. Epidemiology of depression among infertile and fertile couples in Shiraz, Southern Iran. *Indian Journal of Medical Sciences* 2006; 60(10): 399-403.
 21. Chachamovich J R., Chachamovich E, Ezer H, Agreement on perceptions of quality of life in couples dealing with infertility. *J. Obstet. Gynecol. Neonatal Nurs*, 2010; 39(5): 557-65.
 22. Verhaak C M, Lintsen A M, Evers A W. Who is at risk of emotional problems and how do you know? Screening of women going for IVF treatment. *Hum. Reprod* 2010; 25(5): 1234-40.
 23. Fekkes M, Buitendijk S E, Verrips G H. Health related quality of life in relation to gender and age in couples planning IVF treatment. *Hum. Reprod.*, 2003; 18(7): 1536-43.
 24. Terzioglu F. Investigation into effectiveness of counseling on assisted reproductive techniques in Turkey. *Journal of Psychosomatic Obstetrics & Gynecology* 2001; 22(3): 133-41.
 25. Donarelli Z, Lo Coco G, Gullo S. Are attachment dimensions associated with infertility-related stress in couples undergoing their first IVF treatment? A study on the individual and cross-partner effect. *Hum. Reprod* 2012; 27(11): 3215-25.

