International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Ishrat S et al. Int J Reprod Contracept Obstet Gynecol. 2023 Jan;12(1):1-4
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20223292

Original Research Article

Quality of life of infertile women as measured by WHOQOL-BREF in Bangladesh

Shakeela Ishrat*, Marufa Hossain, Mahamuda Yasmin, Dilruba Akhter, Tasmin Akter, Fatema Haque, Joyutpala Shukla

Department of Reproductive Endocrinology and Infertility, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh

Received: 19 November 2022
Accepted: 06 December 2022

***Correspondence:**
Dr. Shakeela Ishrat,
E-mail: shakeelaishrat@bsmmu.edu.bd

ABSTRACT

Background: Quality of life (QoL) is lower in infertile women. Fertility expectations are as variable as social norms and culture and so is QoL. We expect to explore the QoL of infertile couple in a traditional society like that of Bangladesh.
Methods: We measured the quality of the life of 88 infertile women attending the Department of Reproductive Endocrinology and Infertility, Bangabandhu Sheikh Mujib Medical University, with WHOQOL-BREF questionnaire, covering physical, psychological, social and environmental domains. The scores were calculated in the range of 4-20 and 0-100.
Results: When we calculated in the range of 0-100, infertile women had mean score of 61.12 in physical, 54.78 in psychological, 70.36 in social and 58.63 in environmental domains. Nearly half (41.7%) of the women scored at or below 50 in psychological domain compared to 26% in physical, 14.6% in social and 28.1% in environmental domain.
Conclusions: The QoL of infertile women as measured by WHOQOL-BREF has moderate scores. The women are disadvantaged in psychological domain compared to physical, social or environmental aspects. So, they need more psychological support during treatment.

Keywords: Infertility, QoL, WHOQOL-BREF

INTRODUCTION

Infertile women are those who fail to conceive within one year of conjugal life. In a traditional society like Bangladesh all women expect to get married and bear child in time. Infertility is equivalent to failure to fulfill the objective of the average women's life. Fertility expectations vary according to social norms and culture, and traditionally a Bangladeshi woman's life is centered on being the mother of children.[1] There is increased pressure on infertile couples from families and community because reproduction and continuation of family are held extremely important. Women have to bear the blame and burden of childlessness to the major extent even when the male factor is responsible. Infertile women seeking treatment have lower QoL.[2] There are lower QoL scores in physical, psychological, social and environmental domains.[3] In addition to physical problems, infertile women have psychological, and relational problems that adversely affect their QoL.[4]

World Health Organization (WHO) emphasized that QoL should be assessed as the individual's perception of their position in life within the context of their culture and values as well as their goals and expectations, standards and concerns.[5] The WHOQOL-100 and WHOQOL-BREF is an instrument available in more than 40 languages including Bangla, allowing measurement and comparison of QoL across different populations. The WHOQOL-BREF is a 26-item instrument encompassing four

domains: physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items); it also contains QoL and general health items.[6] Each individual item of the WHOQOL-BREF is scored from 1 to 5 on a Likert response scale. The scores are then transformed linearly to a 0-100 scale. The physical health domain includes items on pain, medical treatment, energy, discomfort, sleep, ability to perform daily living activities and capacity for work. The psychological domain measures include positive feelings, self-esteem, thinking, learning, memory and concentration, bodily image and appearance, self-satisfaction and negative feelings. The social relationships domain has questions on personal relationships, social support, and sexual life. The environmental health domain covers issues related to freedom, physical safety and security, physical environment, financial resources, opportunities for acquiring new information and skills, participation in and opportunities for recreation/leisure, home environment, health and social care: accessibility and quality.[6] The WHOQOL measures the success in adaptation to the existing life or condition.

The objective of the study was to measure the QoL of infertile women in Bangladesh so that they can be compared to that of other populations as well as conditions.

METHODS

The cross-sectional observational study was carried out in the Department of Reproductive Endocrinology and Infertility, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh, from October 2021 to March 2022. This was a cross-sectional study of 88 infertile women attending outpatient department and consenting to interview.

We examined the impact of infertility on the QoL of the participants using the Bangla version of the WHO QoL questionnaire brief (WHOQOL-BREF) downloaded from WHO website.[7] Trained interviewers approached the infertile women attending the Department of Reproductive Endocrinology and Infertility. The purpose of the questionnaire survey was explained. A verbal consent was obtained from each of the participants. A face-to-face interview was conducted and the patient reported outcomes were recorded in paper and pencil. All answers were presented with a five-point-Likert scale. Domains were not scored when two or more items are missing (or 1-item in the 3-item domain social relationship) and then transformed on a scale from 0 to 100 or from 4 to 20 following the scoring guidelines.[6] A higher score indicated a better QoL.

Ethical clearance was obtained for study from institutional ethical review board. Data analysis was performed using SPSS version twenty-one. Descriptive statistics were reported by mean±standard deviation or proportion, as appropriate.

RESULTS

Data were collected from 88 infertile women attending the Department of Reproductive Endocrinology and Infertility. Table 1 describes the socio-demographic profile of study participants. The women were of reproductive age, mostly housewives from low-income urban families with less than 10 years of education. Majority had primary infertility of more than 3 years.

Table 1: Sociodemographic profile of the participants, (n=88).

Parameters	Number	Percentage (%)
Age (years)		
15-29	60	68.16
30-45	28	31.39
Education (years)		
<5	13	14.66
6-10	43	49.47
>10	23	35.87
Occupation		
Students and professionals	18	20.21
Housewives	70	79.79
Residence		
Urban	61	69.68
Rural	27	30.32
Socioeconomic condition (family income per month) (Tk)		
<10,000	31	35.37
>10,000-20,000	33	37.35
>20,000-30,000	17	19.21
>30,000	7	8.07
Duration of infertility (Years)		
<3	27	30.31
3-10	53	60.14
>10	8	9.55
Type of infertility		
Primary infertility	55	62.92
Secondary infertility	33	37.08

Question no 1 (How would you rate your QoL?) and 2 (How satisfied are you with your health?) of the WHO-BREF questionnaire assessed individuals' overall perception about their QoL and satisfaction level regarding their health, respectively. The average score was 3.5±0.84 (median 4, range 1-5) for the first question and 3.2±0.84 (median 3, range 1-5) for the second question.

Table 2 describes the scores in different domains. Our study revealed that the overall QoL of infertile women in the psychological domain is lower than physical health, social relationship and environmental domains. Nearly half (41.6%) of the infertile women scored low in psychological domain, compared to 26% in physical, 28.1% in environmental and 14.6% in social domain.

Table 2: WHOQOL scores of infertile women in different domains.

WHO QOL scores	Physical		Psychological		Social		Environmental	
	Mean ±SD	Median, min-max	Mean ±SD	Median, min-max	Mean ±SD	Median, min-max	Mean ±SD	Median, min-max
4-20	13.78 ±2.77	14.28, 4.57-19.43	12.76 ±2.56	12.67, 4.67-18.00	15.26 ±2.83	16.00, 8.00-20.00	13.38 ±2.28	13.50, 7.50-19.00
0-100	61.12 ±17.35	64.28, 3.57-96.43	54.78 ±16.01	54.17, 4.17-87.50	70.36 ±17.68	75.00, 25.00-100	58.63 ±14.31	59.37, 21.88-93.75
Low scores (at/below 50)	26.0%		41.7%		14.6%		28.1%	

DISCUSSION

The infertile women have moderate or not so high QoL with lower scores in psychological domain compared to physical, social and environmental domains. The WHOQOL scores are calculated on women's subjective feelings about how they adapt to their condition rather than the assumptions of third parties like health care providers, family or community. The highest score is in social domain. This is rather unexpected as personal and social relationship is not that hampered. Credit goes to the closely knit family and social bonding available in this country.

The scores of infertile women can be compared to the WHOQOL-BREF scores of other patient populations.

Rapp et al evaluated the QoL of adults having disorders of sexual development with WHOQOL-BREF. [8] The scores were 70.1 in physical health, 63.9 in psychological domain, 62.6 in social relationship and 73 in environmental domains. The infertile women of Bangladesh had lower QoL than them in all domains except social. According to Skevington et al women with PCOS have comparable scores in two domains, 66.20 (physical) and 60.97 (environmental) but lower in the other domains, 50.93 (psychological) and 49.43 (social). [9]

Joshi et al did a study on QoL of patients with chronic kidney disease maintained on hemodialysis.[10] There were overall low QOL scores: physical domain 45.93, psychological domain 51.23, psychological domain 51.23, social domain 49.86 and environmental domain 53.17. The infertile women were similar to these patients in psychological and environmental scores. This may be explained by the chronic nature and the associated financial strains of the conditions, infertility and CKD. Trindadea et al evaluated the QoL of hemophilia patients.[11] The scores were 61.13 in physical, 70.0 in psychological, 76.47 in social and 64.88 in environment domains. The infertile women had lower scores compared to hemophilia patients in all domains. Skevington et al compared the QoL domains for 27 health conditions using the WHOQOL-BREF.[9] Even prisoners scored better (physical 79.19, psychological 70.89, social 74.21, environmental 69.92) than the infertile women in Bangladesh. Conditions that scored better than infertile women in psychological domain include sleep disorder, disfigurement, mild dementia, skin disorder, diabetes and irritable bowel syndrome. Conditions that had psychological scores comparable to that of infertile women are chronic fatigue syndrome, chronic schizophrenia, neurodegenerative disease, arthritis, chronic pain, heart transplant, stroke, Crohn's disease and colitis.

The couples with unmet expectations of parenthood are often overwhelmed with grief, anger guilt and shame. Infertility has many negative effects on women like depression and anxiety, social isolation and depression, diminished self-esteem, feeling of guilt and reduced sense of self control.[3] The most common psychiatric disorders among infertile men and women are anxiety and depression. The meta-analysis by Fallahzadeh et al reveals that depression and anxiety scores are higher in infertile compared to fertile couples.[12] Age, lack of at least one child and lack of support from the husbands are the predictors of depression and anxiety in infertile women. Treating these psychiatric disorders is important for increasing the success of treatment. Psychological intervention in terms of cognitive supportive therapies is useful in these cases. Anxiety is a sense of threat, tension and worry whereas depression is a sense of loss, sadness and absence of control. Treatment for infertility by itself can lead to adverse psychological distress, due to cost, failure of treatment etc.[13] Clinically significant depression increases during treatment.[14] Procedures of MAR (medically assisted reproduction) expose the couples to financial strains and experiences like lack of control, uncertainty about positive outcome etc. Clinical depression is present in 26.2% women and 9.2% of men having MAR. Clinical anxiety is prevalent in 14.8% women and 4.9% women.[15] In a study by Chen 2004 et al generalized anxiety was 23.2% and major depression 17% in women seeking in vitro fertilization.[16]

There are several limitations of the study. The study was conducted in one hospital and QoL could not be compared in different socioeconomic groups. There was no comparison group of healthy fertile women. The QoL may be better evaluated by Ferti-QoL[14] which incorporates additional variables more specific to infertile women such as treatment environment and tolerability.

CONCLUSION

The QoL of infertile women as measured by WHOQOL-BREF has moderate scores. The women are disadvantaged

in psychological domain compared to physical, social or environmental aspects. So, they need more psychological support during treatment.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Nahar P, Van Der Geest S. How women in Bangladesh confront the stigma of childlessness: Agency, resilience, and resistance. Med Anthropol Quarterly. 2014;28(3):381-98.
2. Bayoumi RR, Koert E, Boivin J, Viswanath K, McConneli M. Quality of life of Sudanese patients attending a fertility Clinic: a mixed method study. Health Psychology and Behavioural Med. 2021;9(1):1006-30.
3. Namdar A, Naghizadeh MM, Zamani M, Yagmaei F, Sameni MH. Quality of life and general health of infertile women. Health and Quality of Life Outcomes. 2017;15:139.
4. Karabulut A, Ozkan S, and Oguz N. Predictors of fertility quality of life (FertiQoL) in infertile women: analysis of confounding factors. European J Obstet Gynecol Reprod Biol. 2013;170:193-97.
5. World Health Organization's Quality of Life group: Measuring Quality of Life; Development of the World Health Organization Quality of Life Instrument (WHOQOL). 1992. Available at: https://www.who.int/tools/whoqol. Accessed on 3 June 2022.
6. World Health Organization. WHO-BREF: Introduction, administration, scoring and generic version of the assessment. Geneva: WHO. 1996. Available at: http://www.who.int/mental_health/media/en/76.pdf. Accessed on 9 August 2022.
7. World Health Organization. WHOQOL: Measuring quality of life. Available at: https://www.who.int/tools/whoqol/whoqol-bref/docs/default-source/publishing-policies/whoqol-100-guidelines/translation-methodology. Accessed on 12 October 2020.
8. Rapp M, Mueller-Godeffroy E, Lee P, Roehle R, Kreukels BPC, Köhler B, et al. Multicentre cross-sectional clinical evaluation study about quality of life in adults with disorders/differences of sex development (DSD) compared to country specific reference populations (dsd-LIFE). Health and Quality of Life Outcomes. 2018;16:54.
9. Skevington SM and McCrate FM. Expecting a good quality of life in health: assessing people with diverse diseases and conditions using the WHOQOL-BREF. Heall Expectations. 2011;15:49-62.
10. Joshi U, Subedi U, Poudel P, Ghimire PR, Panta S, Sigdel MR. Assessment of quality of life in patients undergoing hemodialysis using WHOQOL-BREF questionnaire: a multicenter study. Int J Nephrol Reno Vascular Dis. 2017;10:195-203.
11. Trindadea JC, de Lacerda Viggianoa LJ, Branta ER, de Oliveira Lopesa CA, de Fariaa ML, de Sá Ribeiroa PHN, et al. Evaluation of quality of life in hemophilia patients using the WHOQOL-bref and Haemo-A-Qol questionnaires. Hematol Transfus Cell Ther. 2019;41(4):335-41.
12. Fallahzadeh H, Abadi HZ, Momayyezi M, Moghadam HM, Keyghobadi N. The comparison of depression and anxiety between fertile and infertile couples: A meta-analysis study. Int J Reproduct Biomed. 2019;17(3):153
13. Lakatos E, Szigeti JF, Ujma PP, Sexty R, Balog P. Anxiety and depression among infertile women: a cross-sectional survey from Hungary. BMC Women's Heal. 2017;17(1):1-9
14. Lawson AK, Klock SC, Pavone ME, Hirshfeld-Cytron J, Smith KN, Kazer RR. Prospective study of depression and anxiety in female fertility preservation and infertility patients. Fertil Steril. 2014;102(5):1377-84.
15. Pozza A, Dèttore D, Coccia ME. Depression and anxiety in pathways of medically assisted reproduction: The role of infertility stress dimensions. Clin Pract Epidemiol Mental Health: CP EMH. 2019;15:101
16. Chen TH, Chang SP, Tsai CF, Juang KD. Prevalence of depressive and anxiety disorders in an assisted reproductive technique clinic. Human Reproduct. 2004;19(10):2313-8.

Cite this article as: Ishrat S, Hossain M, Yasmin M, Akhter D, Akter T, Haque F et al. Quality of life of infertile women as measured by WHOQOL-BREF in Bangladesh. Int J Reprod Contracept Obstet Gynecol 2023;12:1-4.