Title:
Pilot study examining the quality of life of infertile men and women in Sudan

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Study question:
Is there a need to assess quality of life (QoL) and its determinants in infertile men and women in Sudan and the Middle-East?

Summary answer: Despite severe consequences of childlessness, Sudanese patients reported good QoL, possibly related to being in treatment, warranting investigation of determinants of QoL and coping strategies.

What is known already: It is well known that infertility negatively affects QoL1,2,3,4,5. The fertility quality of life (FertiQoL) reliably measures QoL in infertile patients6,1 in four core domains: mind/body, emotional, relational and social as well as two treatment domains: treatment environment and tolerability6. In Sudan infertility has been shown to be a major concern for couples, and to cause extreme psychological consequences for women7. Similar reports in other Middle-Eastern countries like Iran8 and other developing countries in general9,10,11 have been reported. Being male, engaged in treatment, and having a longer duration of infertility have been shown to predict better QoL12.

Study design, size, duration: A cross-sectional pilot design was used. Patients attending the University of Khartoum Fertility Center semi-private infertility clinic in Khartoum, Sudan were recruited from January to March 2017. Eligibility included being a patient at the clinic and there were no exclusion criteria. Ethical approval was sought and provided by the Psychology Department, Cardiff University.

Participants/materials, setting, methods: In total, 37 (92.5%) agreed to participate and 36 (90%) completed the study. The materials included the 16 item Background Information Form used to ascertain demographic and reproductive characteristics and the Arabic FertiQoL. Forty patients were approached in the waiting room and invited to the study. Those who agreed signed the consent form and were administered the questionnaire in a private room, individually or as a couple. RB and research assistants collected the data.
Main results and the role of chance: Of the 36 participants, five (13.9%) were men and 31 (86.1%) were women. The average age of the sample was 33.9 (SD=8.89) years, average duration of marriage was 4.4 (SD=3.69) years and average duration of infertility was 3.8 (SD=3.26) years. The majority (72.2%, n=26) were educated beyond high-school.

The mean FertiQoL score was 74.5 (SD=11.65), higher than international and regional reports. Core domain scores from highest to lowest were: social (79.5, SD=14.95), mind/body (75.0, SD=16.61), relational (68.6, SD=16.00) and emotional (65.7, SD=19.72). The average treatment score was 78.5 (SD=14.56).

Significant predictors of QoL were identified. Longer duration of marriage (0.510, p=0.005) and of infertility (0.371, p=0.048) were associated with better treatment QoL (e.g., perceived accessibility to services, satisfaction with care), which could reflect benefits of greater fertility knowledge of the more experienced patients.

Amenorrhea (no period) was positively correlated with core score (0.397, p=0.027), mind/body (0.444, p=0.012) and relational (0.406, p=0.023) domains. Menorrhagia (heavy period) was negatively correlated with relational domain (-0.360, p=0.047). The correlations between FertiQoL domains and menstrual problems require more investigation but suggest that type of diagnosis could moderate the specific effects of infertility on QoL.

Limitations, reasons for caution: The main limitation was lack of untreated infertile control group. Additionally, 86% of participants were women and the three individuals who declined participation were men, limiting generalizations to male populations. Generalizations were limited by sample size, but the study was intended as a pilot to demonstrate necessity for further study.

Wider implications of the findings: Results were consistent with past research in none Middle-Eastern countries showing that patients in treatment have high QoL. Future research needs to examine how accessibility of treatment reduces severe consequences of infertility, especially among more experienced infertile people. Coping style and religious beliefs could also be relevant, warranting further study.

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References: