

## Infertility and Health-Related Quality of Life in Couples Receiving Assisted Reproduction Techniques

**Dr. P Domeyer\*, Dr. V Katsari and Dr. P Sarafis**

*School of Social Sciences, Hellenic Open University, Greece*

**\*Corresponding Author:** Dr. P Domeyer, School of Social Sciences, Hellenic Open University, Greece.

**Received:** November 22, 2017; **Published:** November 30, 2017

Infertility is defined as the inability to conceive a child after 12 months of regular unprotected sexual intercourse. Infertility is a major global health problem. The number of infertile couples worldwide currently exceeds 80 million and is projected to peak during the next few years [1]. The problem is further aggravated by the fact that, in our modern societies, an increasing number of women tend to postpone marriage and childbearing for professional or social reasons. The majority of cases are related to primary infertility, while secondary infertility accounts for 25 - 40% of them [1].

There is growing evidence that infertility is a major cause of anxiety [2], which may in turn further aggravate the infertility problem through a variety of mechanisms. Under stressful conditions, the hypothalamic-pituitary-adrenal axis upregulates corticotropin-releasing hormone (CRH), adrenocorticotrophic hormone (ACTH) and glucocorticoids. The increased levels of these stress hormones may alter the timing of ovulation, lessen the luteal phase and diminish the chance of achieving a biochemical pregnancy [3]. Furthermore, increased concentrations of stress-related hormones, such as noradrenaline and cortisol, may reduce the number of good quality embryos [4] or hinder follicular development and embryo implantation [5], respectively. These results highlight the necessity of psychological intervention to infertile couples.

Parallel to that, should pregnancy not be achieved, a couple trying to conceive will surely experience feelings of disappointment or frustration, which may lead to a severe insult to self-esteem, body image, depression and self-assessed masculinity or femininity [2,6]. It has been acknowledged that the infertility treatment has a considerable impact on the couple's physical, psychological and economical level and may prove to be an extremely time-consuming process [7]. Therefore, infertility seems to exert a considerable effect on the couple's health related quality of life.

There exist five validated tools to assess the fertility-related quality of life, namely Fertility Quality of Life (FertiQoL); Fertility Problem Inventory (FPI); Fertility Problem Stress (FPS); Infertility Questionnaire (IFQ); Illness Cognitions Questionnaire-Adapted for infertility (ICQ-I). FertiQoL is the most widely used infertility-specific instrument, with good evidence of content validity [8].

According to Pinar and Zeyneloglu [9], infertile couples experience indeed a significantly greater amount of anxiety and depression compared to their fertile counterparts, which was confirmed by another recent Korean study [10]. Infertile couples may also exhibit a considerable amount of social, environmental and physiological distress [9]. These differences may not be limited to the time frame of infertility treatment, but may extend to the entire gestational period, as evidenced by the longer length of hospitalizations during pregnancy and the higher preterm delivery rate [11]. Men seem to have an overall better quality of life than their female partners [12].

Important predictors of the aggravation of physical component of fertility related quality of life emerged from the study of Mohammad Alizadeh Charandabi, *et al.* [13], including young age, low educational level, low income, long duration of male infertility and low number of IVF or ICSI procedures. Low educational level also seemed to have a negative impact on this component, along with female

gender, according to Rashidi., *et al* [12]. Regarding the aggravation of the mental component, Mohammad Alizadeh Charandabi., *et al.* only noted an association with low income and unexplained cause of infertility, whereas in the study of Pinar and Zeyneloglu [9], low educational level, lack of core-type family, young age, poor information on infertility treatment, long periods of infertility, unemployment and marriage through arranged marriage emerged as important predictors.

Finally, the emotional adjustment of couples undergoing assisted reproduction techniques (ART) seems also to be considerably affected. The number of previous ART cycles affect men's, but not women's, emotional adjustment, by modifying their representations on the importance of parenthood and of childlessness [14]. In addition, couples with longer infertility perceived parenthood as highly important, which adversely affected their emotional adjustment [14]. It seems that sexual and marital satisfaction may be severely affected, thereby reducing the couple's quality of life [15,16]. Low life quality in conjunction with lack of marital satisfaction may lead to divorce [17,18].

To conclude, infertility exerts a negative multidimensional effect on the couples' quality of life. The need for psychological intervention is imperative, in order to minimize the negative feelings that these couples experience and to support them during both the infertility treatment and the period until successful pregnancy.

## Bibliography

1. Araoye MO. "Epidemiology of infertility: social problems of the infertile couples". *West African Journal of Medicine* 22.2 (2003): 190-196.
2. Verhaak CM., *et al.* "Women's emotional adjustment to IVF: a systematic review of 25 years of research". *Human Reproduction Update* 13.1 (2007): 27-36.
3. Nakamura K., *et al.* "Stress and reproductive failure: past notions, present insights and future directions". *Journal of Assisted Reproduction and Genetics* 25.2-3 (2008): 47-62.
4. Li X H., *et al.* "Baseline psychological stress and ovarian norepinephrine levels negatively affect the outcome of in vitro fertilization". *Gynecological Endocrinology* 27.3 (2011): 139-143.
5. Michael AE. "Life after liquorice: the link between cortisol and conception". *Reproductive BioMedicine Online* 7.6 (2003): 683-690.
6. Domar AD., *et al.* "The prevalence and predictability of depression in infertile women". *Fertility and Sterility* 58.6 (1992): 1158-1163.
7. Covington SN and Burns LH. "Infertility counseling: a comprehensive handbook for clinicians". Cambridge, New York: Cambridge University Press (2006).
8. Kitchen H., *et al.* "A review of patient-reported outcome measures to assess female infertility-related quality of life". *Health and Quality Life Outcomes* 15.1 (2017): 86.
9. Pinar G and Zeyneloglu HB. "Quality of Life, Anxiety and Depression in Turkish Women Prior to Receiving Assisted Reproductive Techniques". *International Journal of Fertility and Sterility* 6.1 (2012): 1-12.
10. Chi H., *et al.* "Psychological distress and fertility quality of life (FertiQoL) in infertile Korean women: The first validation study of Korean FertiQoL". *Clinical and Experimental Reproductive Medicine* 43.3 (2016): 174-180.
11. Globevnik Velikonja V., *et al.* "The Quality of Life in Pregnant Women Conceiving Through in Vitro Fertilization". *Zdravstveno Varstvo* 55.1 (2016): 1-10.
12. Rashidi B., *et al.* "Health-related quality of life in infertile couples receiving IVF or ICSI treatment". *BMC Health Services Research* 8 (2008): 186.

13. Mohammad Alizadeh Charandabi S., *et al.* "Health-Related Quality of Life and its Predictive Factors among Infertile Women". *Journal of Caring Sciences* 251.3 (2012): 159-164.
14. Moura-Ramos M., *et al.* "Does infertility history affect the emotional adjustment of couples undergoing assisted reproduction? the mediating role of the importance of parenthood". *British Journal of Health Psychology* 21.2 (2016): 302-317.
15. Monga M., *et al.* "Impact of infertility on quality of life, marital adjustment, and sexual function". *Urology* 63.1 (2004): 126-130.
16. Valsangkar S., *et al.* "An evaluation of the effect of infertility on marital, sexual satisfaction indices and health-related quality of life in women". *Journal of Human Reproductive Sciences* 4.2 (2011): 80-85.
17. Amiri S., *et al.* "Factors Related to Marital Satisfaction in Women with Major Depressive Disorder". *Iranian Journal of Psychiatry* 7.4 (2012): 164-169.
18. Masoumi S., *et al.* "Prevalence of Depression among Infertile Couples in Iran: A Meta-Analysis Study". *Iranian Journal of Public Health* 42.5 (2013): 458-466.

© All rights reserved by Dr. P Domeyer., et al.