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THE EXPERIENCE OF INFERTILITY AND QUALITY OF LIFE OF WOMEN UNDERGOING THE IVF PROCESS – A STUDY IN SERBIA

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Abstract

Studies have shown that women facing infertility and undergoing the IVF process generally belong to the mentally healthy group of the population. However, their stress level and emotional reactions vary significantly. Besides, there are women who report higher anxiety and/or depression levels up to six months after an (unsuccessful) IVF process. The aim of this study is to determine the perception of the infertility experience and the functioning of domains particularly affected by overcoming infertility through IVF. Fourteen women were excluded from the study sample due to their secondary infertility: 9 women had already had a child conceived though IVF and 5 had conceived naturally – these respondents have a successful experience of overcoming infertility, as they do not face the possibility of remaining involuntarily childless. The final sample was comprised of 149 women, 23 to 45 years of age (M=35,50, SD=4,48). For 83,9% of the women, the ongoing IVF procedure was the first (38,3), the second (25,5) or the third (20,1) attempt, while the rest of respondents were going though IVF for the fourth to the eighth time. Infertility is considered the worst experience of their life by 67,8% of the respondents. 95,3% of the respondents in the study want psychological counseling, which is not an integral part of the IVF process in Serbia and thus not covered by the national health insurance. The "Fertility quality of Life" (FertiQoL; Boivin, Takefman and Braverman, 2011) Questionnaire was used for the assessment of quality of life. A one sample t-test shows statistically significant differences in experiencing difficulties in the observed domains. The respondents have the lowest scores on the Emotional subscale, meaning that the most pronounced feature is the impact of negative emotions (e.g., jealousy and resentment, sadness, depression) on quality of life. The score on the Social subscale is highest, which means that social interactions have not significantly been affected by fertility problems. In conclusion, the infertility experience is highly stressful for a significant number of women and they are in need of psychological support, especially for overcoming negative emotions. This can be done by defining a new way of life filled with contentment, one that is in accordance with their value systems, despite their experience of infertility.

Keywords: *Infertility, IVF, FertiQoL, psychological support.*

1. Introduction

Generally, undergoing in vitro fertilization (IVF) treatment is an emotional and physical burden for an infertile woman, which can impact the success of the IVF cycle – the pregnancy rates, and later even mental health (Frederiksen et al., 2015; Rocfkliff et al., 2014). Even though the earliest research into the psychological aspects of the IVF process indicate that infertile couples are mentally healthy in general (Edelmann, 1994; Mazure and Greenfeld, 1989), there results have also been obtained on the significant individual differences in emotional responses (An et al., 2013; Rockliff et al., 2014; Verhaak et al., 2005). Studies have shown that women, compared to men, have more pronounced symptoms of depression, state anxiety, infertility specific distress, and general perceived stress (Mahlstedt et al., 1987; Wichmann et al., 2011). A psychological evaluation of 200 couples preparing for IVF has indicated that one half of the women, compared to 15% of the men, stated that infertility is the most upsetting experience of their lives (Freeman et al., 1985). Even though most women adapt to an unsuccessful IVF cycle, there are still those who continue to experience anxiety and/or depression six months after the treatment (Verhaak et al., 2005; Verhaak et al., 2007).

1.1. Fertility quality of life

Considering that the negative reactions to infertility and the medical treatment can have effects not only on well-being, but also the outcome of the treatment and the readiness to continue with the treatment, it is necessary to monitor and improve the quality of life (QoL) of women involved in the IVF process. However, measuring instruments meant for the general population cannot be used for this purpose, as we are dealing with infertility-specific distress and QoL, as well as specific treatment reactions. A measuring instrument of QoL from the aspect of infertility – FertiQoL- has been developed by Boivin et al. (2011), and has been translated into 46 languages (http://sites.cardiff.ac.uk/fertiqol/). Numerous studies carried out using this instrument enable a comparison of fertility QoL between various countries (e.g., Li et al., 2019), prior to receiving and following psychological support such as mindfulness-based intervention (e.g., Li et al., 2016).

1.2. Objectives

The aim of this study is to obtain data on certain aspects of the infertility experience which may be significant for the counselling process (the severity of the experience, the need to receive psychological support), as well as for determining the scores on the FertiQoL subscales, which is also of considerable importance for any sort of counselling.

2. Methods

2.1. Sample and procedure

The study was carried out in the first half of 2019 in the Republic of Serbia, at a clinic for in vitro fertilization, an online via the website of an association fighting for improved conditions for in vitro fertilization. The initial subsample included 163 female respondents who were at the time undergoing IVF. Fourteen women were excluded from the initial sample due to their secondary infertility: 9 women had already had a child conceived though IVF and 5 had conceived naturally – these respondents have a successful experience of overcoming infertility, as they do not face the possibility of remaining involuntary childless. The final sample was comprised of 149 women, 23 to 45 years of age (M=35,50, SD=4,48). The respondents had not received any psychological support/counseling - that is not an integral part of the IVF process in Serbia, and only a few fertility clinics offer this option. All of the respondents were familiar with the purpose of the study and gave their consent. They were aware that they could choose not to participate at any moment.

2.2. Instruments

In addition to questions related to their current IVF process and their perception of the experience of infertility, the female respondents filled out the FertQoL questionnaire (Boivin et al., 2011; Core and Treatment items, with two additional FertiQoL questions aimed at an overall evaluation of their physical health and satisfaction with quality of life).

3. Results

At the time of the study, the female respondents were aged 23 to 45 (M=35,50, SD=4,48). The ongoing IVF procedure was the first for 38,8% of the women; the second for 25,5%; the third for 20,1%; and for the remaining 16,1% of women the number of times ranged from 4 to 8. In answer to the question “Would you say that the knowledge of you having a fertility issue (either you and/or your partner) is the most difficult/worst experience in your life?” received an affirmative response from 67,8% of the female respondents. For 32,2% of the female respondents the worst event most frequently was the death of someone close to them (a parent, a sibling), or someone they are close to contracting a severe illness (three female respondents mentioned having a miscarriage as the worst thing to happen to them in their life). Most of the female respondents wanted to have psychological counselling – 95,3%.

In order to obtain insight into the domains in which fertility QoL is the highest, or lowest, a one sample t-test was carried out, with a scaled Core FertiQoL score mean as the test value.

Table 1. One-Sample t-test.

Test value = 48.88 (Scaled Core FertiQoL score Mean*)						
Core FertiQoL	t	df	p	Mean difference	95% Confidence Interval Upper	Lower
Emotional	-6.129	148	.000	-8.40	-11.11	-5.69
Mind Body	-.525	148	.600	-.81	-.3,86	2.24
Relational	-.767	148	.445	-.61	-2.20	.97
Social	8.458	148	.000	9.94	7.62	12.26

Note. * Scaled Core FertiQoL score SD = 12.02

Table 1 shows that the scores were lowest for the Emotional, and highest for the Social subscale.

The significance of the correlation between all the FertiQoL subscales was also tested – Core, Treatment and two overall evaluations - physical health and satisfaction with quality of life.

Table 2. Correlations between all FertiQoL measures.

	Core FertiQoL (+ Emotional subscale)			Treatment FertiQoL		Two additional items, overall evaluations	
	Mind Body	Relational	Social	Treatment Environment	Treatment Tolerability	Evaluation of physical health	Satisfaction with quality of life
Emotional	.718**	.395**	.618**	.165*	.347**	.068	.235**
Mind Body		.382**	.626**	.048	.428**	.144	.265**
Relational			.368**	.200*	.426**	-.137	-.014
Social				.144	.396**	.125	.260**
Treatment Environment					.314**	.126	.121
Treatment Tolerability						.125	.263**
Evaluation of physical health							.426**

Note. * Correlation is significant at the 0.05 level (2-tailed); ** Correlation is significant at the 0.01 level (2-tailed).

There are evident differences in the correlations between the Treatment subscale and Core subscale. There are low significant or even insignificant correlations between satisfaction with the treatment, the fertility clinic and staff (the Treatment environment) and the Core subscales. Contrary to that, there are more moderate correlations between Treatment tolerability and all the Core subscales.

What is interesting is that, in our sample, there is no statistically significant correlation between the evaluation of physical health and either one or the other FertiQoL measure, while a significant correlation was determined between satisfaction with quality of life and almost all the scores.

4. Discussion

The youngest female respondent in the sample was aged 23, and the oldest was aged 45; most of the sample (approximately 70%) is in the age range of 31 to 40 years. For most women (slightly over 80%) the IVF treatment they were undergoing was their first, second or third – this should be borne in mind since a study of the experience of infertility and the quality of life could give different results among women who had experienced several unsuccessful cycles. Of the 149 female respondents, 101 responded in the affirmative to the question “Would you say that the knowledge of you having a fertility issue (either you and/or your partner) is the most difficult/worst experience in your life?”. This clearly illustrates that the subjective experience of the burden of experiencing infertility. Life events which are estimated to be more difficult that the problem of infertility mostly referred to death or the severe illness of someone close to them. Almost all the women wanted psychological counselling to be available to them. Considering that infertility treatment is often a long and exhausting process in which women have very little control over the course and outcome of the process, it is necessary to offer support with the aim

of preserving their mental health. A study relying on the FertiQoL questionnaire specifically indicates the domains in which help is most needed.

The scores on the Core subscale were compared to the mean score of the sample (Table 1). The lowest results were obtained for the Emotional subscale. This subscale indicates the experience of negative emotions associated with the experience of infertility (e.g., jealousy and resentment, sadness, depression). For the female respondents, infertility is, above all, an emotional burden and assistance is needed to overcome any negative emotions. The highest scores, that is the least affected domain of functioning, are social interactions – the female respondents do not feel excluded or stigmatized regarding infertility. These are encouraging findings, since it is easier to offer individual support, that is support for a couple, than to change the attitudes of their environment. The scores of the Mind Body (negative physical, cognitive or behavioral disruptions) and Relational subscale (the effects of fertility problems on the marital relationship or partnership in multiple domains – sexual intercourse, communication, commitment) are found between these highest and lowest results. It is not possible to say that there are no problems in these domains, since the scores can be as high as those on the Social subscale, but the difficulties that the female respondents are facing here are estimated as less difficult than those regulating negative emotions.

Compared to the results obtained in other countries, it could be said that the female respondents from Serbia have very low FertiQoL scores. For a sample of female participants from China the mean score was 64.54 ± 16.90; in Turkey 66.97 ± 14.35, in the Netherlands 70.80 ± 13.90, in the United States 72.30 ± 14.80, and in Germany 73.00 ± 12.00 (Li et al., 2019), which is quite high compared to the mean score of our sample – 48.88 ± 12.02. Psychological counselling is not an integral part of the IVF process in Serbia, and if couples find themselves in need of it, they must finance it themselves. Our female respondents were not receiving any counselling – it could be that this is the source of their low scores. If we were to take into consideration that the state (only) finances three IVF procedures and that couples often have significant expenses during the procedure itself (for example, additional examinations or medication), the financial pressure accumulated during the treatment is not negligible. The Republic of Serbia is classified as an upper middle-income country, but the annual household income per capita of 2,813.399 USD in December 2019 (https://www.ceicdata.com/en/indicator/serbia/annual-household-income-per-capita) does not leave a lot of room for additional expenses, which psychological counselling represents. For that reasons it is necessary to provide free psychological support in all fertility clinics.

Finally, considering that the female respondents were actively undergoing IVF, we studied whether there were any possible linear connections between the Treatment subscale and the Core FertiQoL (Table 2). A significant, albeit low, positive correlation was determined only between satisfaction with the treatment itself (the accessibility and quality of the treatment and interactions with the medical staff) and the scores of the Emotional and Relational subscales. Contrary to that, there is a moderate significantly positive correlation between Treatment tolerability (experience of mental and physical symptoms and disruption in daily life due to treatment) and all the Core subscales. Even though it cannot be said that Treatment received from the environment is of no importance to the female respondents, what we are referring to are situations in which they find themselves on occasion, and which last a (relatively) short period of time, as opposed to tolerance to the treatment, which is long-term and more widespread. This finding serves to emphasize the importance of alleviating all the consequences that can be influenced – some physical symptoms can be an inevitable part of the treatment, but different experiences of the circumstances and the establishment of a satisfactory way of life despite infertility can certainly be influenced. The importance of general satisfaction with life is also supported by the fact that there is a significant positive correlation between this evaluation and almost all the FertiQoL measures (except the Relational and Treatment environment subscales), while evaluation of physical health is not statistically significantly related to any of the scores.

The results of this study indicate that the fertility QoL of women in Serbia undergoing IVF is not satisfactory, and that affordable/free psychological support is necessary in this process.

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