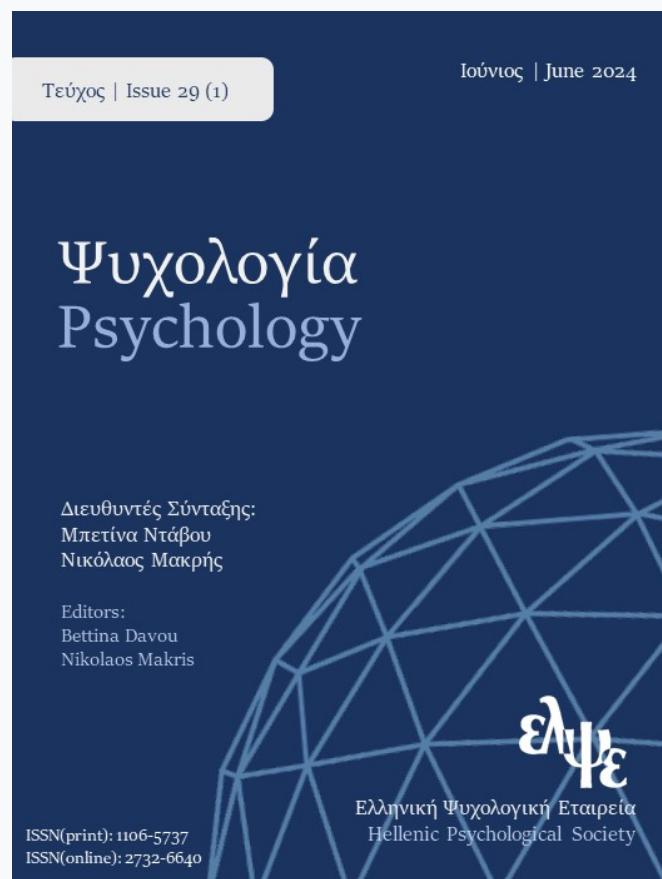


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Infertility: Experiences of Greek women undergoing in vitro fertilization

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ABSTRACT

This study aims to explore the experiences of Greek women in the IVF process at the premedication stage, i.e. before the ova harvest and the embryo transfer. The sample consists of eight women with a history of infertility, diagnosed for at least a year. The study was qualitative, and the data collection was carried out through a one-to-one, face-to-face semi-structured interview, while a phenomenological approach to describe the women's experience was adopted. According to the results, these women seem to be going through various stages of emotional distress and feel that they receive inadequate support from their families and social backgrounds. They want the social fabric and the medical staff to have a holistic approach that will include the particular psychosocial dimension of the issue. It is suggested that future research efforts take into account the socio-cultural background of the infertility experience and explore in-depth the experiences of couples undergoing IVF procedures. Finally, it is recommended that the support procedures for these couples include a broad range of counseling for the family and the couple, with emphasis on strategies for coping with stressful situations and handling the social environment.

Introduction

Infertility has been defined as “failing to produce a pregnancy that results in a live birth either after one year of unprotected regular intercourse if you're under age thirty-five, and after six months if you're over thirty-five” (Domar & Kelly, 2004, p.13). It has been characterized as a growing problem for contemporary couples, and it affects men and women with almost equal frequency. The two most common factors for infertility have been couples' delay in deciding to give birth to a child, and consequently, the conception becomes more difficult to accomplish, and the environmental contaminants (Domar & Kelly, 2004). Specifically, in the last decades, environmental toxicants and chemical contaminants in the human reproductive tissues and fluids were quantified, demonstrating target tissue exposure. For instance, occupational exposure to chemicals and intentional exposure to toxicants present in cigarette smoke have been associated with a decreased reproductive function (Foster et al., 2008; Roberts, 2020), while male infertility and a decreasing trend in sperm quality have been correlated with the industrialization and the discharge of synthetic substances into the environment (Selvaraju et al., 2020).

In 1978, an assisted reproductive technology, known as In Vitro Fertilization (IVF), was applied to achieve pregnancy. Since then, IVF has become one of the most common methods of assisted reproduction (Sher et al., 2005, p. xvii), and 8 million children alive today have been conceived utilizing IVF (Taffs et al., 2023).

Parenthood motivation for couples undergoing IVF procedure has been related to socio-cultural, as well as gender-related factors, with men expressing a desire for marital completion and women placing emphasis on fulfilling gender-role requirements while self-integration and well-being factors seem to be significant (Cassidy & Sintrovani, 2008; Newton et al., 1992; McLaughlin & Cassidy, 2018). The experience of infertility is emotionally distressing for both partners, in particular for women (Cassidy & McLaughlin, 2016; Gana & Jakubowska, 2016). For instance, the review of Malina and Pooley (2017) indicated, among others, stress, anxiety, guilt, helplessness, fear, sorrow, distrust, and hostility as psychological consequences of infertility in a couple's life. Especially for women, the bibliography suggests that they could end up with depressive symptomatology and, if infertility remains unexplained, they are likely to develop somatization (Suna et al., 2016; De et al., 2017).

As far as the couple's relationship is concerned, marriage therapists support that sexual relations and financial burdens are the most common reasons for conflicts between spouses, and infertility problems may include both. Programmed sexual activity, the economic burden of medical examinations and therapies, and the final association of sex with failure may affect the relationship (Domar & Kelly, 2004). While bibliography results have been controversial about the role of infertility in the couple's sexual dysfunction (Galhardo et al., 2011; Luk & Loke, 2015), it seems that infertility affects couples' psychological well-being, marital adjustment and quality of life (Luk & Loke, 2015; Monga et al., 2004; Navid et al., 2023).

Objective

The bibliography on Greek couples' infertility experience is limited. To our knowledge, there are only six relevant study areas. Specifically, these study areas concern:

- a) the psychosocial aspects of infertility in Greek couples (e.g., Tarlatzis et al., 1993; Lykeridou et al., 2009; Chatjouli et al., 2017; Alexopoulou et al., 2022),
- b) the effects of IVF and ICSI (intra cytoplasmic sperm injection) as used methods of assisted reproduction (Papaligoura et al., 2004),
- c) the consequences of coping strategies on pregnancy rates (Panagopoulou et al., 2006),
- d) the experiences of women who achieve pregnancy through genetic material donation or surrogate motherhood (Papadatou et al., 2016),
- e) the comparison of motives for parenthood between English and Greek women undergoing IVF (Cassidy & Sintrovani, 2008).

In total, it seems that European as well as American bibliography has extensively studied women's handling of infertility and involvement in IVF processes. However, the study of women's experiences, as they report them at various phases of IVF procedure, seems to be almost unexplored. Researchers acknowledge the need to assess women's responses during these different phases, implying that several biomedical and psychosocial factors may be different from phase to phase (Eugster & Vingerhoets, 1999; Monga et al., 2004). For instance, it was found that women's stress levels are higher during the ova harvest and embryo transfer and lower at the start of the treatment (Mahajan et al., 2010).

It seems that the stage women are going through may reflect a different psychological state for them. The effort to gain more particular insight into the step-by-step process could constitute one of the next steps for the relevant research. In this study, we aimed to explore the experiences of Greek women at an early stage in the IVF process, and in particular at the premedication stage. This specific stage has been described as a rather emotionally stress-relieved stage, therefore the shared experiences would be as accurate as possible. It is worth mentioning that the participants were intentionally all women in order to gain insight into the experience of those who will undergo the IVF procedure receiving the relevant treatment, that is, mainly the medication and the invasive techniques. We mainly aim to study women's experiences since women's quality of life seems to be more affected than that of men (Li et al., 2016).

Methodology

The sample

Our convenience sample consisted of eight women who were undergoing the IVF process in four different clinics in Greece, located in Athens, Larissa, and Ioannina. Two of the clinics were public, and two of them were private. The criteria for selecting the sample were as follows: their native language had to be Greek, their infertility had to be diagnosed for at least a year, and they had to be in the premedication stage at the time of the interview and, therefore, before the ova harvest and the embryo transfer.

The participants' demographics ranged from 28 to 41 years; four women were under 35, and four were over 35. The duration of their marriage ranged from 1.5 to 19 years. The participants' demographic characteristics are presented in Table 1.

Table 1 Participant demographic characteristics

Cases	Age	Years of Marriage	Education Level	Region zones	Attempt
Case 1	28	2.5	Higher	Rural	1st
Case 2	41	2	Higher	Semi-urban	4th
Case 3	37	11	Secondary	Semi-urban	3rd
Case 4	36	11	Higher	Urban	1st
Case 5	31	1.5	Higher	Semi-urban	1st
Case 6	33	3.5	Higher	Urban	3rd
Case 7	39	19	Compulsory	Rural	5th
Case 8	31	2	Higher	Semi-urban	1st

Measures

The study was qualitative, and the data collection was carried out through a semi-structured interview, with one-to-one, face-to-face, and mostly open-ended questions. The qualitative methodology is particularly appropriate for this understudied area, as it aims to understand, describe, and interpret the nature of psychosocial phenomena (Leeming et al., 2016). The questions focused on women's experiences related to infertility before, during, and after the diagnosis phase, the motives for deciding to proceed to IVF, as well as the factors perceived to have a positive or negative influence on their experience. Specifically, they focused on the following areas" a) demographics, b) relevant experiences before and during diagnosis, c) motivations for the decision to have children with assisted reproduction methods, d) factors they perceived to have a positive or negative influence on their experience, e) the perceived role of a child in their lives, f) the changes that occurred in their lives and g) the coping strategies they used to handle any negative emotions caused by the process.

Interview process

An announcement on a forum of Greek women dealing with infertility problems informed them of our research project and invited them to participate. From the respondents, we chose the ones who met the study criteria. Firstly, each of the eight participants was personally approached and thoroughly informed about the subject, the purpose of the study, and the data confidentiality. After consultation, the day and time of the interview were set to allow the preparation of the available space and time required. The interviews were taken in the researchers' offices after taking into account the participants' place of residence. During the interview, emphasis was given on the possibility of stopping the process at any point if they felt uncomfortable or unpleasant for any reason. Besides, their consent was requested to record the interviews without revealing their identity. After the briefing, all of the eight women agreed to participate in the study with written consent. The interviews had a duration of

35-50 minutes. A pilot study preceded this study. Specifically, two women who had already had at least one successful pregnancy by artificial insemination were interviewed with the same questions as described above so that the content of the interview was inspected and tested. The study was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments.

Data analysis

This study was conducted on the basis of the phenomenological approach in order to describe the women's experience, as well as to express thoughts and feelings. The purpose of phenomenology is to study phenomena and describe them as they are presented in order to produce a form of knowledge of the world as it is revealed to us through our participation in it (Husserl, 2002; Willig, 2015). Phenomenology allows the researcher to think about the submitted life experiences and explore them (Hopkins et al., 2016). To analyze the data, we followed the steps of Barthakur and his collaborators (Barthakur et al., 2016). Specifically, we transcribed, proofread, and re-read the interviews to gain an understanding of the experiences. Subsequently, we read line by line to identify the broad area of phenomena to be studied, and the statements were assigned meanings to recognize the phenomena's intricate details. Afterward, codes were grouped into a cluster of themes and categories, and the emotions reported were integrated into an analytical description of the study aspects and were provided to experts for review. Finally, experts' feedback was incorporated. The following sections summarise the units that emerged from the analysis:

1. The experience of the effort before the diagnosis of infertility
2. The experience of diagnosing infertility and the suggestion for IVF
3. The decision to proceed to the IVF solution
4. The IVF process
5. The relationship of the couple - the husband's role.

To ensure rigor and trustworthiness, one researcher conducted all the interviews. During the process, the researcher took a few notes unobtrusively about the emerging emotions and any hesitations, which were taken into account when analyzing, presenting, and discussing the data. The verbatim transcription was done by a transcriptionist trained in qualitative research, and all audio recordings were compared to the transcripts to ensure the accuracy of the content. Two investigators performed the data analysis, and each of them was reviewed twice. To ensure the analysis of the data without bias, all researchers involved had not undergone IVF processes.

Results

The experience of the effort before the diagnosis of infertility

The very strong feelings and the need for painful medical examinations dominated the discussion for the period preceding the diagnosis. The themes that emerged from the data are presented in Table 2.

Table 2 “Before the diagnosis” themes

Emotions: sorrow, depressed mood
Pain
Need for medical examinations
Conjectures about the reasons
Unrealistic optimism

The participants explained thoroughly that in order to set the diagnosis of infertility, the couple experiences an extended period of effort, with free sexual intercourse, to achieve a pregnancy. Participants' list of negative feelings was broad, including sadness, mental pain, anxiety, intense desire, and symptoms indicative of depressed mood. For instance, the below-presented participant described the disappointment, as well as the despair she felt after the repetitive failure, month after month, to conceive:

"... I was very embarrassed, and I had gone through a depression stage before... No... before starting the procedure, because I could not get pregnant, I had my period every month, and then the thoughts started: I will never have children, why does it happen to me... (pause)" (Case 3).

Sorrow, mental pain, and depressive symptoms often revealed that these women had gone through a mourning process repeatedly: "... and every month we said ah my period came, the house was silent. Mourning, mourning, we both did not talk. We were both silent. There was silence, yes..." (Case 8).

After a period of inability to get pregnant, the participants searched for medical assistance and entered a range of planned examinations. Women seemed to need to talk thoroughly about this particular experience, and they felt it was a painful and, sometimes, traumatic one:

"...I take the decision to do a laparoscopy ... bloodless surgery, so ... First of all, they sedate you; when I woke up I had some more intense abdominal pains, eh ... more intense than the period, namely some girls may have even more severe pains. I do not feel pain when I have my period, but there I was feeling a little bit more intense pain. I could not bend well, laugh, I had abdominal pains because they fill the belly with air ..." (Case 8).

"... I went to do the salpingography, it hurt, it hurt so much because, in fact, they insert the contrast material, it fills your fallopian tubes, and it is a pain, it is a painful examination. I can say that I characterised it as the worst examination of my life" (Case 8).

It seems that most women end up in the examination stage already emotionally exhausted. After a tense period, they are called to carry through organically and emotionally demanding procedures.

The experience of diagnosing infertility and the suggestion for IVF

The emotions that dominated during this period and the possible infertility factors were the themes that participants concentrated on. The themes that emerged from the data are presented in Table 3.

The first reactions right after the diagnosis involved denial of the situation, a sense of injustice, and anger. The participating women tried procedures of questionable effectiveness, which could hopefully help them avoid the IVF procedure, such as taking vitamins:

"... However, when they first told me about the IVF, I felt -from head to toe- something was piercing me, I was burning. Oh, this is not the case, she is not saying this to me now. It is on my mind since May, I know it is not going well, and I am going for IVF, but I was thinking maybe with the vitamins, I didn't believe it too much ... I did not want to believe it ... It is just that when you are young and healthy, eh, what to think... It seemed a bit difficult... Eh... I thought, why me ..." (Case 1).

Furthermore, they seemed to feel alone and helpless for the first time, and that other people related to the process would be difficult to sympathise:

“...The first night that I heard I was going to do IVF, the doctor told me that everything is going to be fine, and not to worry about it. However, I think about it because I want it a lot. When I went home, I started crying, and I said, well, he is a bystander, but [the thing is] what will I do...” (Case 1).

Table 3. “*Diagnosis and suggestion for IVF*” themes

Emotions: injustice, anger, helplessness
The financial factor
Infertility factors: male? female? mixed? unknown?
Former life events’ impact on their reaction
The role of the religion
The loss of control

The financial issue was also a big concern for almost all participants, and in some cases, there was an intention to give meaning to the situation. In some instances, a brainstorming process was observed, relevant to concerns and fears about the needed procedures, followed by the intention for re-negotiation, as well as willingness for compromise:

“... The committee justifies four attempts, and it crossed my mind that we are going to make these four attempts, but after this, what would we do? Would we beg? That was the matter! Mainly the financial! Also, I didn’t think about all these for a whole day, but only within 10 minutes, and then ok, I clicked, I clicked [meaning I changed my mind rapidly], and I thought that it’s okay, we are going for IVF, and it’s fine...” (Case 8).

The participants explained in detail that infertility is attributed to male, female, or mixed factors, and sometimes the cause remains unknown. In the first case, women’s reactions were surprise, relief, and a willingness to protect their partner.

“...I didn’t expect it because when a couple admits that they cannot have children, our mind goes straight to the woman. We don’t think much further...’ ‘...Fortunately, in this case, it is my husband who has the problem... Because it is easy to deal with it, they are going to find a spermatozoon for him, and thereon the uterus is ready; this is the machine that makes the child, the uterus... If there is a problem in the uterus, you have to face a plight” (Case 1).

In the second case, the reactions were more deliberate, strongly emotionally charged: “...That is what I said to my mother; you made me problematic, with arrhythmia, blocked fallopian tubes, you made me problematic’ (Case 8).

When the causes were unclear, there was a need for causal attributions and diffused anxiety about the future. Interestingly, in this case, women seemed surprised and afterward relieved, showing that the perceptions of the earlier years still prevailed.

“I remember when I did the laparoscopy and Mr. ... [doctor’s name] entered the room and I said ... “Yes, doctor, yes...” I was expecting to hear that something is wrong. He replied, “What are you expecting to hear? Everything is fine.” So, then, I was disappointed. ‘Now? I’m thinking.... Because.... if you have to solve the mental part, for example, in my case, it’s a lot harder than taking a pill...” (Case 4).

The negative feelings of the previous period seem to be present during the diagnosing period as well, but the participants present feelings such as anger and injustice for the first time. Furthermore, finding the infertility factors seems to be crucial for the respondents.

The decision to proceed to the IVF solution

The decision to proceed to the IVF solution was usually made under time pressure and the participants seemed to reminisce about it as an emotionally charged period during which they had to decide quickly, taking into account a number of parameters and dealing with different pressure sources. The themes that emerged from the data are presented in Table 4.

Table 4. “*The decision to proceed to the IVF solution*” themes

Motivations: internal or social
Cognitive process and emotions that lead to the decision
Positive and negative aspects
The role of supportive network and medical staff

The decision to undergo IVF was discussed mainly in relation to the motivations that led the participants to this choice, as well as regarding the positive and negative aspects of the decision.

Motivations

The motivation to have a child seemed to play a significant role in choosing and maintaining assisted reproduction as a means of obtaining one. They were distinguished into two categories: internal motivation and social motivation. The first category included the feelings of joy and happiness that the child brings to a person's life, as well as the motivations for personal and family fulfillment, development, and prosperity. It appears that, for some of the participants, childbirth has the meaning of human fulfillment and it is the essence of living: “Life is meaningless without a child; I don't know, that is my point of view, I don't know what others think of it” (Case 7).

The second category of motivations included family and social pressure. It seems that, in some cases, participants carry one extra burden due to the ethical responsibility they think they have to perpetuate the human species: “Everyone wants it too much, also my sister, because she didn't make her own family, she didn't get married nor had children. It's important to them...” (Case 3).

Positive and negative aspects of the decision

The participants presented the IVF as an opportunity to increase the possibility of the couple's child being healthy. They seemed to discuss medical protocols with outstanding comfort. Specifically, the participating women expressed their recognition of the importance of the prenatal check-up applied in IVF processes. They seem to understand the importance of the prevention and control programs for healthy embryos. Furthermore, they discuss preimplantation genetic diagnosis and seem more relieved and confident about their children's health. For instance: “...The benefits of the IVF are that you can get a healthy spermatozoon, a healthy embryo, you can avoid many diseases, such as cystic fibrosis, Mediterranean anemia, all of these...” (Case 1).

The psychological discomfort experienced was pointed out as the main disadvantage of the method by almost all the participants. Furthermore, the cost of treatment has been underlined as a prohibitive factor, particularly for those who are not qualified to make the process in a public center:

“...The disadvantages are the mental part and the stress of not knowing what you 'll have to face; that is the main thing. The financial aspect is also a disadvantage, I suppose, but for those in private centers. I'm in a public center, and I don't know. They've told me that in the private centers, IVF is expensive... and it's also

a time-consuming process with the medicines, the committees, etc. That's all about the negative side, primarily the psychology" (Case 1).

The participants seemed to need to regain some balance in their lives. They seem to consider that internal as well as social factors affect their final decision and they weigh the positive and negative aspects of their situation.

The IVF process

The participants took a long time to describe the IVF process. The emotions during this period, the stressors, the attitude of the family and the social environment, and the role of the medical staff were of most concern. The themes that emerged from the data are presented in Table 5.

Table 5. "The IVF process"

Stressors
Therapy procedure
Therapy cost
Feelings
Family and social environment
Medical staff
Everything has changed

Feelings

The IVF process brought out the participants' negative as well as positive feelings. Concerning the negative feelings, these were mainly related to the infertility fact they had to compromise with and accept. These feelings were concentrated on losing control, anger, a sense of injustice, sorrow, and pain. For instance:

"...There is the fear of the unknown, as well as the process and its evolution. I'm positive and optimistic that everything will go well, but there is also something unknown, something beyond my control. I cannot predict what's going to happen, and I am afraid of the possibility that something might go wrong, but I want to believe that everything will be fine..." (Case 5).

"...I feel sorrow and pain... For example, I pass by a shop window with clothes, toys, and I think that I will never be able to get something like that... [she weeps]. That's the kind of thoughts I make..." (Case 3).

Regarding the positive emotions, they were mainly about the positive meaning of the IVF solution that gives them the opportunity to hope again and have the strength to fight for their dream. These feelings were principally related to relief, hope, and acceptance of the new reality. For instance: "I can tell that the process is more enjoyable than the years gone by because now I'm trying and I'll succeed at some point; in the past, there was a lot of disappointment" (Case 3).

The participants who tried more than once highlighted the difference between the first try and all the other efforts. They insisted on talking and explaining about the way they lost their optimism and felt helpless:

"...After the first attempt, I felt a little down, and I made the second effort soon. Though, after the second effort.... I said okay, the first time you think it won't succeed, how lucky could you be? But the second time, the conditions and the quality of the embryos we made were better... but finally, it was also fruitless... and then I had the first panic attack. In the summer, I felt like I had a permanent anxiety crisis. I had continuous

dyspnea because I was thinking about it, and it didn't go away, you know, it was a continual vicious circle..." (Case 6).

Stressors

The participants highlighted the nature of the treatment, the medication, and the cost of the treatment as significant stressors. They expressed great anguish about the therapy's consequences on their health and seemed confused about the association between the use of the related hormones and cancer.

"...or, for example, I wonder if the medications are going to cause problems to my health because these hormones are supposed to cause cancer. Later, they said that these hormones do not cause cancer, but if you incline to it, it will come sooner..." (Case 6).

Family and social environment

The relatives were considered mainly important, and their presence was regularly appreciated. It seems that the participants also had an increased need to feel supported and get real empowerment from relatives to keep trying. For instance: "When your mother, your husband, your mother-in-law, and your brothers and sisters tell you two or three times "we are here, we will all help you, not only financially but also psychologically", they give you hope..." (Case 8) or even: "...We talk about it when I have these fears that it may not succeed, I try to discuss it, and my family gives courage to me. Sometimes, even without discussing anything, I feel they are next to me..." (Case 5).

However, the family environment often became obtrusive and indiscreet for them, and, in this case, it could form an extra stress factor in the whole process:

"... Hmm, my brothers and sisters, my mother and my father call me all the time "how are you?" [She changes the tone of her voice]. I don't like these things. My husband also behaves like that to me; he tells me sweet words, not to worry me, and that's the worst for me" (Case 8).

Moreover, the lack of understanding in the social environment, especially the workplace, caused unpleasant feelings and serious doubts about their empathy capabilities. Interestingly, it seems that, in some cases, participants perceive their behavior as hostile, and they believe that the social environment treats childlessness as a stigma:

"...I only mind my colleagues' attitude; it disturbs me, and I am very irritated, but okay, these things happen... I don't want them to tell me "do whatever you want" or "leave whenever you want", [but I want] just a little more understanding, just this, understanding; also the nature of our work demands to understand the others. Do you understand? I do not care, though... fortunately, I can get sick leave. However, I didn't expect it..." (Case 2).

Most respondents emphasized the need for contact with people who had similar IVF experiences. They seemed to have increased needs for understanding, empathy, and more information. These provisions may ensure more process control, as well as help in decision-making. For instance:

"...Yes, yes, but I would like to have someone who experiences this or has already experienced it, to discuss it better because it is not the same to discuss it with people who have not experienced it; they could tell me what they know about a doctor or their experiences. I don't have anyone in my family environment to tell me..." (Case 1).

The medical staff

The sample's personal experience of contacting with the medical and nursing staff was sometimes perceived satisfactory and sometimes not. In most cases, the participants seem to have a need for a psychosocial and empathetic approach and they were disappointed whenever the staff had a strictly professional approach. It appears that the medical staff could influence one of the most important factors for IVF success, the psychological balance of the prospective mother. The following case is revealing:

"The doctor told me "you will have children". I admit that I felt nice [she smiles and says it with a sense of satisfaction] when I heard that because I realized that now I'm in the process of having children, I felt confident like there is nothing else, now I'm going to have children. I have confidence; I'm going to have children. There's no possibility of not having children. We will soon have children!" (Case 8).

The IVF process seems to be particularly demanding and the environment could either be considered as an extra stressor or an encouraging factor, depending on their attitude. Additionally, the participants' need for an empathetic attitude towards them seems to be important.

The couple's relationship - the husband's role

The respondents seemed ambivalent about the plethora of issues regarding the changes in the couple's relationship. Especially the couple's sexual life, as well as the companionship balance, seemed to be tested in this period. The themes that emerged from the data are presented in table 6.

Table 6. 'The couple'

Sexual life changes
Companionship changes
Need to protect husbands' role
Complaints/ weaknesses
Feelings of dreams cancellation

Conjugal relationship and sexual life before the diagnosis of infertility

All respondents stated reduced sexual desire as a result of the mandatory sexual activity program and of the stress during this period. Mainly, the respondents doubted the effectiveness of this method because it destroyed the desire to conceive and affected the necessary enthusiasm and optimism. The following case is indicative:

"... I remember the first gynecologist. She had scheduled when I would make love with my husband; I had to make love with him on specific days. I don't remember precisely, but that was the worst, and I remember me wishing not to conceive a child that way [...] And even when we sometimes quarreled, we should still stick to our program. And it was the worst" (Case 4).

"... No, no, the process of continuous effort had changed because of this purposeful thing, the fact that it must be done at that time, etc., brings a lot of pressure, lessens a lot our enthusiasm.... At one point it became for both quite tiring" (Case 6).

Husband's attitude during the diagnosis and the procedure

Although most respondents' partners were described as helpful since they played a decisive role in accepting the new condition, in some cases, their inability to support the IVF attempt is indicated. For instance, in the first case, the following example is characteristic:

“...In the morning I learned it, but in the evening I thought "It doesn't matter, let's go for IVF. The end!" My husband played a major role in this because he learned it first, and he came into the room and told me that we had to do IVF. He said, 'It doesn't matter; we will have twins'. But back then, these thoughts were very intense, and at the same time, my husband understood me and told me not to worry about the financial part. Even if we don't qualify for the committee, we will find the money, and even if we don't qualify the second time, we will get the money..." (Case 8).

Many of the respondents mentioned their husband's difficulty confronting the unsuccessful attempts. It seems like the participants sometimes had to deal not only with their personal physical and psychological preparation but also with their husbands' needs.

“...He had lost control for a while, and he started drinking after all this, you know. He was feeling sad when the efforts were not fruitful; I could understand him, but he didn't speak to me; he was saying that we would do what we can, and that's okay, but then he also made crazy things [she laughs]” (Case 7).

The changes in companionship

Despite all the difficulties reported by the participants concerning their partner, it was found that fertility problems were considered to have caused a feeling of greater emotional attachment to their husband: “... I can tell you that we have been even more attached to one another because the one cares about the other; this is when you truly appreciate him, within the problems you see how much he supports you” (Case 1).

The participants reported occasions of sexual abstinence by choice:

“...The sexual contacts have stopped. From my part actually, because I have in mind that in a few days I will have to start, and how will I do it... in general I think too much, and I am not at all in the mood” (Case 8).

“...It's ok for him, and I can take my hat off to him [Greek expression meaning 'I appreciate it'], probably he is not annoyed yet because he says, okay, it's the moment, the time, I give her time for now. Okay, it's not an incredibly long period” (Case 8).

On the other hand, it seems that IVF had a positive impact on some participants' sexual activity, as in some cases, the way that the couple conflates this experience into their lives can change the whole meaning of the process: “...After we had entered these processes, we knew that they would be the ones to bring a child in life, the rest is for fun!...I can even say that all of this became better back then [she laughs]” (Case 6).

The data concerning the changes in the couple seem to be equivocal. The respondents emphasized the need for empathy and better understanding.

Discussion

This study investigated the IVF experience of women with procreation issues. To our knowledge, this is the first study in Greece that examined Greek women's experiences undergoing an IVF process while already in the process. As far as we know, it is also the first relevant study in Europe to have been conducted exclusively in the premedication stage. Since the bibliography implies that the stage women go through during the process may reflect a different psychological state, gaining insight into the step-by-step process would enlighten in detail about this stressful life event.

During the interviews, the expression of emotions was dominant in every stage. In general, the participating women seemed to express the need for more empathy and understanding during the whole process. Furthermore, they underlined the critical role of the 'important others' in their lives during this difficult period.

In particular, it was found that until they decided to apply for the IVF method, the participants went through various discomfort stages to reach the adaptation stage. The stages they experienced included denial, anger, finding positive aspects amid negotiations, guilt, sadness, and acceptance of the problem. These steps are remarkably similar to the stages described by Kübler-Ross (1969) and refer to the grief process a person follows to accept a significant personal loss, such as the death of a loved person or the announcement of a terminal illness, which signals the loss of a healthy life. Past studies focused on either these or slightly different stages to describe the process of adapting infertile couples to the new data (e.g., Blenner, 1990; Schoener & Krysa, 1996; Thorn, 2009). They pointed out that experiencing loss involves not only the possibility of not having a natural child but also the loss of the dream of procreation without the help of science.

Mindful meditation techniques could prove beneficial to control women's negative emotions. Mindfulness means "paying attention in a particular way: on purpose, in the present moment and nonjudgmentally" (Kabat-Zinn, 1994, p.4). Infertile individuals struggle with being kind and understanding towards themselves when in pain and failure and seem less capable of perceiving their experiences as part of the larger human experience, as well as less aware of their unpleasant thoughts and feelings in an open and non-judgmental way. Furthermore, their negative emotions, such as anger, deep sorrow, and enduring mourning, may lead to maladaptive coping strategies. Overlooking the evaluations of 'good' and 'bad' and taking a non-evaluative stance toward all these emotions could facilitate emotional awareness, acceptance, willingness, and, finally, increased emotion regulation (Li et al., 2016).

The descriptions of the participants' experiences included increased stress and discomfort at every stage. Stress affects the lives of infertile couples, the success rate of assisted reproduction, and the adaptation to any adverse outcome of an IVF effort. It has been widely studied and recognized as a factor that influences but also allows handling in order to affect both the woman and the couple to be affected at a lesser level (Gana & Jakubowska, 2016; Turner et al., 2013; Hajela et al., 2016). Emotional distress is even more pronounced in a second IVF cycle, reflecting the depressing effect of having failed on the first try (Cassidy & McLaughlin, 2016). However, Galst's (2018) review research concludes that, despite years of research, the association between stress and infertility remains elusive. Although stress has been shown to impact the reproductive system, stress, and fertility do not fall into a simple causal association, and the exact mechanisms by which stress is interfering are still not understood. However, modern support programs should follow a holistic approach to the issue and provide the space for patients to express their feelings. Specifically, it has been suggested to work with them psychotherapeutically, with sensitivity and attunement to the individual's and couple's emotions and coping skills, as well as medical knowledge (Galst, 2018). They must support the couple's efforts in a variety of ways: mind and body relaxing therapies like yoga (Hajela et al., 2016), health-promoting programs in general (Padideh et al., 2023), psychosocial interventions, such as cognitive behavioral therapy, acceptance and commitment therapy and counseling for individuals and couples (Luk & Loke, 2016).

Perceived personal control, cognitive accommodations such as finding benefits in adversity, and causal attributions have been implicated in how we adapt to threatening events (Mendola et al., 1990). Regarding this study, personal control was described as low, especially during the first stages. Additionally, in the decision stage, women seemed to find benefits in adversity, which has been characterized as a secondary control strategy of the situation (Mendola et al., 1990). Finally, during the 'diagnosis and proposal for IVF treatment' phase, women discussed the need to attribute the infertility causes. Causal attributions may themselves reflect primary and secondary control strategies. For instance, attributing an aversive event such as infertility to one's behavior may be associated with a sense of personal control (Mendola et al., 1990). Consequently, being unable to attribute causes intensified women's feelings of losing control and raised their already high-stress levels. It seems that the sense of having control over the situation is crucial for the women's psychological balance and relates to many aspects of the process. Consequently, future interventions should take this into account and address supportive

programs that help women regain control diversely in order to lower their stress levels and support the success of the process.

During the decision stage, the women of our sample consider both the internal and the social factors related to IVF and weigh the positive and negative aspects of their decision. According to the conflict theory model of decision-making (Janis & Mann, 1977), the decisional balance construct reflects the individuals' consideration before deciding on the perceived advantages (pros) and disadvantages (cons). Prochaska and his colleagues (1994) investigated the association between the decisional balance and the stages of change across 12 problem behaviors, such as smoking cessation, weight control, sunscreen use, and mammography screening. They found that during a behavioral health change, the balance between pros and cons changes; as individuals progress through stages, the pros of changing the relative behavior increase, and the cons decline. It would be interesting to investigate if this process applies to individuals who decide to undergo IVF procedures.

Counseling should start at an early stage of the process; thus, potential relationship difficulties can be identified on time, and future breakdown can be prevented (Cassidy & McLaughlin, 2016). Counseling should also include an exploration of their social environment support and a treatment plan, especially in case treatment fails (Wischmann & Kentenich, 2017). Stress management and coping strategies training, such as problem-focused and emotion-focused strategies for the couple, as well as psycho-education for both the couples and their therapists, may support the couple's mental health (McLaughlin & Cassidy, 2018; Malina & Pooley, 2017).

As far as the sample is concerned, it was selected by a forum, which is an important limitation, since all participants were familiar with the web-based social networks and positive to share their experiences. Apparently, the experiences of women who did not have these characteristics and probably women who were deeply traumatized by the experience were highly unlikely to be presented in this study.

The interview took place during the premedication period and before the embryo transfer. Although the particular time has been intentionally chosen, this is likely to be a limitation of the research since experiences are probably perceived variously in another phase of the process or after its completion. It would be useful for future studies to include the exploration of the experience of women undergoing IVF by periods or before and after the procedure. Furthermore, the selection of a sample consisting only of women signifies a limitation in the perception of the couple's development within the process of the attempts for childbearing.

Conclusion

This study investigated the experiences of women at the premedication stage of IVF. These women seem to be going through various stages of emotional discomfort and feel that, during their efforts, the support of the family and the social environment is insufficient. Additionally, they seem to prospect for a holistic approach that will not sideline the psychosocial dimension of the issue, both from the social fabric and the medical staff. Future research efforts that will take into account the socio-cultural background and will explore in-depth and by periods the experiences of couples undergoing IVF procedures are likely to clarify the deepest aspects of the issue. Conclusively, it is advisable that the support methods for these couples include counseling for both the family and the couple, emphasizing the strategies that can confront stressful situation and the social environment.

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Υπογονιμότητα: Εμπειρίες Ελληνίδων που υποβάλλονται σε εξωσωματική γονιμοποίηση

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ΛΕΞΕΙΣ ΚΛΕΙΔΙΑ	ΠΕΡΙΛΗΨΗ
Υπογονιμότητα IVF Εμπειρίες Ελληνίδες Γυναίκες	Η παρούσα μελέτη στοχεύει να διερευνήσει τις εμπειρίες των Ελληνίδων κατά τη διαδικασία της εξωσωματικής γονιμοποίησης, στο στάδιο πριν από τη λήψη φαρμάκων, δηλαδή πριν από τη λήψη των ωαρίων και την εμβρυομεταφορά. Το δείγμα αποτελείται από οκτώ γυναίκες με ιστορικό υπογονιμότητας, με διάγνωση που τέθηκε τουλάχιστον έναν χρόνο πριν. Η μελέτη ήταν ποιοτική και η συλλογή των δεδομένων πραγματοποιήθηκε μέσω μιας ημι-δομημένης συνέντευξης πρόσωπο με πρόσωπο, ενώ υιοθετήθηκε μια φαινομενολογική προσέγγιση για την περιγραφή της εμπειρίας των γυναικών. Σύμφωνα με τα αποτελέσματα, αυτές οι γυναίκες φαίνεται να περνούν από διάφορα στάδια συναισθηματικής δυσφορίας και νιώθουν ότι δε λαμβάνουν επαρκή υποστήριξη από τις οικογένειές τους και το κοινωνικό τους περιβάλλον. Έχουν την ανάγκη τόσο ο κοινωνικός τους ιστός όσο και το ιατρικό προσωπικό να προσεγγίζουν το θέμα ολιστικά, συμπεριλαμβάνοντας την ψυχοκοινωνική διάσταση του θέματος. Προτείνεται οι μελλοντικές ερευνητικές προσπάθειες να λάβουν υπόψη το κοινωνικο-πολιτισμικό υπόβαθρο της εμπειρίας της υπογονιμότητας και να διερευνήσουν σε βάθος τις εμπειρίες των ζευγαριών που υποβάλλονται σε διαδικασίες εξωσωματικής γονιμοποίησης. Τέλος, προτείνεται οι διαδικασίες υποστήριξης γι' αυτά τα ζευγάρια να περιλαμβάνουν ένα ευρύ φάσμα συμβουλευτικής για την οικογένεια και το ζευγάρι, με έμφαση σε στρατηγικές που διαχειρίζονται επιτυχώς τη στρεσογόνο κατάσταση και το κοινωνικό περιβάλλον.
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