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Women's perceptions and experiences of the challenges in the process of male infertility treatment: A qualitative study

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Abstract

Background: Despite the fact that both men and women are equally subject to infertility, it is usually women who bear the burden of treatment and its consequences, even in cases of male infertility. Therefore, it is more necessary to recognize their health problems in order to help them.

Aim: To explore women's perceptions and experiences of the challenges they face in the process of male infertility treatment.

Methods: This qualitative study was conducted during 2014-2015 using content analysis. Thirty semi-structured interviews were conducted with women whose husbands suffered from male infertility. Purposive sampling was conducted until data saturation was achieved. All interviews were recorded, transcribed and analyzed using conventional content analysis adopted by Graneheim and Lundman.

Results: From data analysis, the major category of "treatment-related stresses" and four subcategories of "high treatment expenses", "inefficiency of healthcare system", "being captive in the infertility treatment" and "treatment failure" emerged.

Conclusion: Experiences of women who face male infertility indicate their various concerns in the process of treatment. Therefore, it is required to develop emotional and financial support for the clients and to promote their quality of healthcare services. In addition, awareness of treatment challenges of these women can assist proper planning to promote the quality of services they need.

Keywords: Male Infertility; Women; Treatment Challenges; Qualitative Study; Perception; Experiences

1. Introduction

Infertility appears to be a critical period and among the worst life experiences (1) that is associated with the physical, economic, psychological and social stresses that affect all aspects of people's lives (2). Prevalence of infertility has increased by fifty percent over the past two decades and today about five million couples suffer from infertility worldwide (3). Gender is a factor that affects the individuals' reaction to and compatibility against infertility. Infertility is typically regarded as a feminine problem, despite the fact that male infertility is responsible

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for at least fifty percent of couples' infertility (1, 3-5). Some studies have shown that even in the cases of male infertility, women are more distressed and show more emotional responses to infertility. Indeed, women suffer from the same distress, whether they are the cause of infertility or not (6). Nevertheless, most women seek treatment for infertility when it occurs, because, although they may not be the cause of infertility, they are held responsible by relatives and society, and they would rather avoid upheaval in their personal or social life (7). However, with regard to limited resources in developing countries, high expenses of infertility treatment, expenses not being covered by supportive organizations such as insurance companies, prolonged treatment, side effects of medication, and various problems of treatment procedures, mental turbulence is exacerbated especially in women. Results of studies such as Cousineau and Domar illustrate that emotional burden resulted from infertility treatment, and its expenses create problems including mood changes, aggressiveness, isolationism, and depression for couples and women's contribution in these problems is mostly greater than men's (8). Results of studies by Gourounti et al. and Martins et al. show that women are damaged by infertility and its treatment more than infertile men (10, 11). Results of studies conducted in Iran indicate that infertile men experience less stress and have higher mental health compared to women (9). In fact, these studies show the need for an in-depth review of challenges resulted from male infertility treatment in women. Although several studies have been conducted in Iran on male infertility, they are almost designed quantitatively and have low responsiveness, low power of deep-mining and the inability of questionnaires used in examining some concepts have criticized the results of these studies. In addition, researchers have paid less attention to challenges and problems of women with infertile husbands; while, this group of women encounter many psychological problems, they are less considered by health policy-makers despite bearing the major burden of this problem (13, 14). Therefore, considering their challenges and problems, paying attention to them in health planning and policy making is of major importance, since it is required to explain their understanding of problems and considerations of men's infertility to help this group of women. Qualitative method is selected since infertility also has socio-mental aspects. These variables are very important and because of complications of infertility and lack of comprehensive information, qualitative method better answers research problems while conducting studies on socio-mental phenomena (15). Therefore, this study was conducted to explain women's perceptions and experiences of the challenges they face in the process of male infertility treatment.

2. Material and Methods

2.1. Research Design

This is a qualitative study using content analysis approach, which was conducted during 2014-2015 in Mashhad, Iran. Research population is women with infertile husbands. Participants were all women referring Milad Infertility Center of Mashhad University of Medical Sciences as well as women identified by volunteers of Mashhad Health Centers and people who the author was acquainted with in the public or introduced by relatives and friends.

2.2. Sample Size and Sampling Method

Sampling was conducted using purposive sampling until data saturation, since in qualitative studies, the proper sample includes all participants with the best information on intended phenomenon, and who are interested in talking about their ideas regarding that phenomenon. In addition, sampling conducted with maximum variability that includes purposive selection of the sample with a wide range of changes in intended dimensions, is the selected sampling design in qualitative studies. Data saturation occurs when more sampling does not provide more information and it is only a repetition of data collected earlier. In this study, participants were selected using purposive sampling with maximum variability (in terms of age, occupation, education, duration of marriage and infertility) until reaching data saturation. Thirty semi-structured interviews with eighteen women with infertile husbands were conducted.

2.3. Selection criteria

The main inclusion criteria for women included diagnosis of primary infertility for their husbands, at least one year of marital life spent, having no step-child and the tendency to share their experiences. Exclusion criteria include having history of divorce, remarriage or giving birth.

2.4. Data Collection

To collect data, in-depth and individual semi-structured interviews were employed. This type of interview is a characteristic of qualitative research by way of being in-depth and flexible. All interviews were conducted in an environment with capability of maintaining participants' privacy to allow them openness, in order to share their experiences. Before conducting the interview, participants were asked about the possibility of recording their interviews and they were assured of confidentiality of all issues raised. At the beginning of each interview session,

discussion began with a public talk and participants were asked to talk about their experiences on infertility treatment. Next, questions were focused on more important issues based on participants' replies. In addition, they were asked to fill a questionnaire of demographic information including age, education and duration of infertility. Finally, after appreciating, participants were informed of possible later interviews in person, as well as coordination for the time and method of later contacts.

2.5. Ethical Considerations

This project is confirmed by the ethics committee of Mashhad University of Medical Sciences, and informed and written consent was obtained from participants. Informed consent (through clear explanation of research and its objectives as well as completing a consent form), maintaining anonymity, confidentiality of information, the right to resign during the study and other ethical considerations were observed.

2.6. Data Analysis

Data were analyzed using conventional content analysis via MAXqda software. First, all interviews were transcribed and reviewed several times. Then, data were read line by line and main concepts were specified and coded. Later, extracted codes were classified considering similarities or differences, and categories were developed.

2.7. Trustworthiness of Data

Qualitative authors typically use four criteria of Lincoln and Guba namely credibility, dependability, confirmability and transferability (16). In this regard, the following methods were used in this study:

2.7.1. *Prolonged engagement with data:* This was conducted by repeated interviews (if required), review of interviews several times to gain insight, reviewing the initial codes and their modification, reviewing various stages of analysis through the process of data reduction and allocating adequate time to elicit the underlying meaning of participants' experiences .

2.7.2. *Peer debriefing:* This was carried out by giving codes and emerged categories to experts familiar with qualitative studies, who were asked to review the coding and analysis method and give feedback on its validity.

2.7.3. *Member check:* For this purpose, the author returns coded data to participants (the codes and primary classes). They are asked about their views and to evaluate the authors' interpretation of their explanations to see whether these interpretations are proper and an impartial expression of their views. They were also asked to comment on whether the findings of study match their experiences.

2.7.4. *Providing audit trail and evaluation of the study by external supervisor:* In this study, for audit trail, it was attempted to explain all stages of study from the beginning to the end, to allow external supervisors to carry out auditing based on these documents, and following authors' methods and their way of accessing the results of auditing in order to be able to assess the adequacy of analysis.

3. Results

Mean age of participants was 34.27±8.9 years (between 24 and 59 years of age). Women's educational level was varied from illiterate to master's degree and infertility duration was between 2 to 42 years (Table 1). A major category of "treatment-related stresses" along with four subcategories of "high treatment expenses", "inefficiency of healthcare system", "being captive in the infertility treatment" and "treatment failure" were emerged through analyzing data obtained from interviews on women's perceptions and experiences of the challenges in the process of male infertility treatment, which is elaborated below (sections 3.1-3.4).

3.1. High Treatment Expenses

One of the major concerns of participants was high treatment expenses. Although most women complained about back-breaking expenses of infertility treatment, poor family affordability and high treatment expenses have endangered the life of participants with low economic status. Most women expressed the following statements repeatedly: "Its expenses were very high for us, and gave great concern on how to afford it" (Participant N.8). "I asked the doctor how much it costs and he said about 1 and a half million. I said crying, I can't afford it, I'm a tenant, my husband is a laborer and we can't afford it. What about a discount?" (Participant N.7). "We had financial problems; we couldn't afford the tests and similar costs. I asked my husband to go and find a job to save one or two million because the IUI operation costs a lot to be conducted. My husband didn't have a fixed job and we didn't have a source of income" (Participant N.16). High expenses of infertility treatment on the one hand and lack of insurance coverage on the other hand impose great burden on couples. In addition, the more the invasive technologies were used, the more the couples were obliged to pay more, and the more they encountered problems for supplying the costs of this treatment. In this regard, a woman said that they have had to bear high costs of IVF for infertility

treatment. Then, she asked to pay more attention to the problem of infertility treatment expenses radically to prevent the collapse of their marriage. “Its cost was also a problem because it imposed high expenses. They said five million but you have to pay over eight million if you start the procedure. There was no insurance coverage although we had Supplementary Medical Insurance (SMI). Each time it imposed heavy costs and it was difficult” (Participant N.10).

Table 1. The profile of participants

Participants	Age (year)	Education	Occupation	Duration of infertility (year)
1	33	Secondary school	Employed	12
2	49	High school	Employed	33
3	59	Illiterate	Housewife	42
4	32	Elementary school	Housewife	9
5	35	University	Employed	10
6	28	University	Employed	2
7	35	Elementary school	Housewife	11
8	44	High school	Housewife	23
9	29	High school	Housewife	4
10	27	University	Employed	9
11	41	Illiterate	Housewife	7
12	35	Elementary school	Housewife	3
13	30	High school	Housewife	14
14	29	University	Employed	8
15	27	High school	Employed	5
16	34	High school	Employed	6
17	26	High school	Housewife	7
18	24	High school	Housewife	3

3.2. Inefficiency of Healthcare System

Inefficiency of the healthcare system was another example of treatment related stresses. In the complexity of treatments, the participants grappled with many stressful problems. Insufficient ART facilities, poor communication skills and improper treatment of the medical team as well as the lack of attention to ethical values, not spending adequate time, and lack of providing sufficient information on treatment were among cases pointed out by participants. In fact, from the perspective of women who attended this study, healthcare providers suffer from emotional analgesia and there is nothing like empathy and occupational ethics among a medical team. Some women had complaints regarding improper behavior of medical staff and the lack of observing ethical and human issues while dealing with the clients. The women stated that medical staff simply address technical dimensions of infertility treatment temporarily and hastily, and mental aspects are less considered as clients are not important to them. In this regard, while criticizing hasty and mass examination by the physician, and instrumental connection instead of a humanistic and emotional connection between doctor and patient, one of the participants said: “It’s not important for them at all and they just want to evade us. They say, please go to that room, undress and wait for examination. For internal examination you can refer us and it costs 1.500 million. Have a good dayand goodbye. It was bad, they add insult to injury and it affects your mood. Physicians think about their fees and visit their patients. There is no empathy. I asked whether they have fetal donation! They did not even allow me to talk. They are ill tempered” (Participant N.17). Lack of understanding women's emotions by the medical team, the lack of altruism in them and having a cool and cold-blooded behavior with clients during treatment stages, especially when treatment failure occurs, as well as lack of infertility improvement were among other considerations of women. One of the women said that when it was informed that varicocele surgery has been ineffective for her husband and there is no other treatment, she encountered unfriendly and aggressive behavior of the physician. In addition, she talked about the lack of physician’s attention to her nonverbal behavior and emotions and said: “The doctor talked very badly and uncomfortably. Obviously, it is very natural for them. While keeping tests and forms, the doctor said, you cannot have a baby. He burst my bubbles. Is it possible to make a dead person alive? He said angrily, what a cry, do this, do that, when you are a stranger in a place ... I was crying and they didn’t care” (Participant N.1). Weakness of medical staff in skills of providing information, spending inadequate time with clients, lack of direction related to details of treatment and lack of accountability to clients' needs as well as asking for unnecessary paraclinical measures were among women's explanations of weakness in communication and occupational services, in addition to a kind of dictatorship between medical staff and clients. One of the women who preferred to obtain all possible information

on suggested treatment methods, especially the information related to the cause of using surgery and its special benefits, talks about deficiency of medical staff in these areas, and about their specifying later treatment without any directions: “We weren’t satisfied with their behavior. They treated me so badly that I sat on the floor and I was sick. Their behavior was not appropriate for a physician. It was too bad. They didn't even answer my simple questions.” She talked about her experiences in this area: “I asked them to give me more directions on what to do. Their reaction was only one sentence, they said, "Do not nag lady! You're not alone here. All of our clients are infertile." Then I said, "These are not accountable." Later on, whenever we referred there, we just waited for them to prescribe a test and now they say those tests were not necessary at all” (Participant N.14).

3.3. Being Captive in the Infertility Treatment

Participants stated that although their infertility has a masculine origin, women refer for treatment alone, or they always accompany their husbands in this course, and spend a lot of time in offices and infertility centers, since, it is the woman who finally becomes pregnant. Therefore, most diagnostic and treatment examinations focused on women. Conducting demanding measures like examinations, tests, surgeries, taking medications (especially daily injections of hormonal medications to stimulate ovary), oocyte retrieval and embryo transfer to women were all a source of stress for them. One of the women said that women are captive in the trap of male infertility whether they want it or not and there is no alternative for them. “Well, I didn’t have a problem. But I always had to refer to the doctor for IUI and IVF. There is no difference whether a woman is infertile or her husband. Anyway, she has to refer to the doctor and take the medications”. (Participant N.8). Participants talked about prolonged process and full-time engagement to solve infertility problem, being under assorted treatment methods from medical to surgical ones, from oral medications to injections and various treatment courses: “They give us that much medication that I was fed up. Just shots and shots, pills and pills, every day we should take pills. Every month I referred there, they prescribed seven to eight shots.” (Participant N.7). “We took a lot of medication. We conducted IUI three times and I conducted IVF five times ... I come and go this long way, in the summer and winter. I just come and go” (Participant N.8). A participant talked about continuous use of hormonal medication during oocyte retrieval, and its replacement in the uterus as well as waiting for the results in IVF method. She said that treatment has affected her soul and body as well as her life, as if the only thing that matters is the final goal, and human issues as well as factors affecting a women’s body and soul during the process of becoming pregnant is less considered. “I conducted IVF; I had shots in sixteen days. Not sixteen days but let's say a hundred sixty days or even ahundred sixty years. It was very hard for me. When I was examined, the surgical section to take oocyte; well it was bothering in terms of pain and taking the oocyte; sixteen days of waiting. I took medication for three months to prepare my body, then taking oocyte and the time it took, expenses incurred, the pain you should bear, and you have to repeat this procedure.” (Participant N.10)

3.4. Treatment Failure

One of the major concerns of women was the failure of treatment method including medical, surgical, traditional and ART methods that imposed great mental pressure on them. In terms of ineffective medical treatments and wasting time and money, the participants said: “We referred to the doctors a lot. But it was no use. Whatever I spent was useless and there was no result. It was all wasted. Nothing happened. Shots and medications, what a waste! That much medication and nothing happened.” (Participant N.7). “I referred to the doctors a lot. They prescribed medications and said, "You'll be alright." But nothing happened. We wasted our money. We lost our money on nothing. This was the laboring money.” (Participant N.4). “She said, take twenty vials and inject two vials a week. I bought the vials. Then, she said go and take a sperm test. He tested and the result was zero.” (Participant N.15). Traditional treatments being ineffective and useless were another description of women for treatment failure. One of the participants who was hopeful for her husband's improvement, talked about leech therapy being ineffective to solve her husband’s infertility: “I thought he would be OK soon. But it was of no use. The result of the test has not changed after several leech therapy sessions. We have not had a baby yet. Leech therapy did not work.” (Participant N.6). Herbal treatments being useless were among other cases mentioned by women. “We conducted herbal therapy for one month, two months, six months and nothing happened. We wasted our money. We realized that these wouldn’t work.” (Participant N.9). Lack of male infertility improvement after varicocele surgery was another form of treatment failure that participants encountered. In this regard, participants talked about facing no change in spermogram tests after varicocele surgery and lack of improvement in their husbands' infertility problem and encountering failure: “I was OK after surgery. I was so calm and said, "Oh! It’s over." I didn’t know we would have other problems. He took a test twice and they said his sperm count is zero and his problem is not solved.” (Participant N.12). "When the doctor saw the result of the test, he said, “I thought he would be OK after surgery.

Unfortunately, I can't do anything anymore." I saw that he was worse than better. I hurt so much." (Participant N.14).

4. Discussion

Women of different ages, education, occupation and infertility duration who had the experience of living with an infertile husband included in this study and through analysis of data, the main category of "treatment-related stresses" and four subcategories of "high treatment expenses", "inefficiency of healthcare system", "being captive in the infertility treatment" and "treatment failure" were emerged. It is noteworthy that within the treatment process, women endure physical, emotional and financial costs. In addition, doing various tests, taking assorted and expensive medications, having several appointments and thinking about what the results of treatment would be, was stressful itself. The point here is that although infertility was a problem in one of the couple in these cases (3), the negative effects of infertility treatment was more intense for women as compared to the men (17-19). Also, treatment expenses could create many problems for families, especially since the result of treatment was not definite. In addition to this, most infertile couples are from middle to lower social classes of society, and this could exacerbate mental, psychological and social problems of families. Results of the study by Meng et al. (2005) demonstrated that new infertility treatments are expensive and families with poor economic status will suffer in supplying these expenses and this will result in many problems including emotional stress and depression (20). One of the issues emphasized by most participants in this study was having fear and being worried about their marital life. It was very important to realize the dimensions and depth of this concept. They imagined infertility as the collapse of marital life, divorce or at least a life with pain and suffering. On the one hand, social pressure and expectations of relatives to have a child exert pressure on women, because in Iran, culturally, if there is a delay in having a baby, it is women who experience the stigma of infertility in the first place. Without considering the cause of infertility, people usually blame women in delayed child-bearing, and even before making a diagnosis of infertility factor, women receive the stigma of infertility. Results of the study by Cousineau and Domar (2007) showed that women are more susceptible and they should be supported through psychological interventions, especially by teaching them stress management (8). Mohammadi et al. (2001) have stated that typically, women take the responsibility for everything unfavorable that happens and as a result of this responsibility, they bear more emotional damage (21). When investigating this issue, several factors could be pointed out in highlighting women's role and holding them responsible for infertility. Fertility is so meaningful and salient for women (22) and any kind of delay in pregnancy is not acceptable by them (14); considering that for most women, becoming a mother is part of feminine identity and gender role fulfilment. Therefore, by losing this opportunity in life, they suffer from various mental, personal and social distresses (18, 23, 24). In addition, pressure of the society on infertility is more focused on women than men (25) and usually relatives expect women to have children more than men. Therefore, women are held more responsible (26). Now, if fertility fails despite many expenses for treatment, women will experience sadness, depression, hopelessness, and despair and in this study, such feelings were observed in women, especially those who had newly started their marital life. These conditions result in the feeling of insecurity and worry about infertility effect on life and instability of marital life. In addition, infertility diagnosis diminishes or destroys couple's hope for having a baby, and since this problem is a common pain according to women, infertility factor is of less significance. In a study by Savadzadeh et al.(2013) it is stated that if the attempt to become pregnant fails, it will result in a destructive emotional experience in couples, but its burden will be more imposed on women (27). In this study, although infertility was due to a male factor, most women referred for treatment alone or they were accompanied by their husbands in treatment courses and spent a lot of time in infertility centers; since, finally they were women who became pregnant, most diagnostic and treatment studies focused on them. Conducting demanding measures like examinations, tests, surgeries, taking daily injections of hormonal medications to stimulate ovary and embryo transfer to women, as well as other medications, were some sources of stress for women (28). Results of the study by Hansen et al. (2002) showed that considering male infertility treatment, women should also be treated; they bear various side effects for themselves and their fetus that could cause itself more stress (29), since they are more worried about their fetus' health than themselves. This issue is important because it will allow women to discard some of the infertility-related tags and their internal problems will decrease. On the other hand, since people are social beings and require social relations with different people, especially relatives of their spouses as well as the fact that family is considered as an open system, even after marriage, they are influenced by their own families. Therefore, infertility is not a private issue between couples; rather it is an issue where dozens of people (family members, spouse of infertile person, their friends and relatives) are involved (30, 31). Results of studies conducted in Iran suggest that most infertile people encounter undesirable reactions in social environments (21, 27 32, 33). Therefore, in Iranian culture, the pressure to have children as well as common social reactions in the society relative to these people, will provide the background for physical, mental and social problems especially for women (34, 35),

particularly, if treatments are not successful and the couples are obliged to refer to infertility centers, repeatedly (36, 37). In fact, this situation is a transfer of private pain to a pain manifested in the society, a pain that is more frustrating than infertility and its treatment (12).

5. Conclusions

In summary, findings of this study showed that women with infertile husbands experience many pressures and concerns in the process of male infertility treatment. Therefore, to pay attention to women's needs in treatment, it is suggested to policy makers in health and medical planning to consider financial and emotional support for clients and promote the quality of medical services. This study creates a deep insight of challenges in infertility treatment that could be used as a base for interventional programs to remove and improve these challenges.

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Conflict of Interest:

There is no conflict of interest to be declared.

Authors' contributions:

All authors contributed to this project and article equally. All authors read and approved the final manuscript.

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