

## RESEARCH ARTICLE

# Quality of life among infertile women living in a paradox of concerns and dealing strategies: A qualitative study

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**Abstract**

**Aim:** The current work investigated the issues that cause apprehension in infertile women, the effects of this disquiet on their quality of life and the strategies that they adopt in dealing with their concerns.

**Design:** The qualitative research.

**Method:** This qualitative research sampled participants from a training centre in Mazandaran University of Medical Sciences and a privately owned infertility centre in Mazandaran Province, north of Iran. Purposive sampling continued until data saturation was reached. We conducted a conventional content analysis of the responses of 30 individuals (15 women with female infertility and 15 key informants) to in-depth and semi-structured in-person interviews on May to November 2019.

**Results:** The results uncovered two themes subsuming four categories of issues: The first theme revolves around “infertility concerns,” under which “concerns” and “the difficulty and vagueness of treatment” belonged. The second theme was “dealing with infertility,” which covered “adaptive strategies” and “inhibitors of reconciliation with perceived infertility.”

**KEYWORDS**

concern, coping strategies, infertility, qualitative study, quality of life

## 1 | INTRODUCTION

Infertility is a major reproductive health problem that can affect quality of life among infertile couples, especially infertile women (Cserepes, Kőrösi, & Bugán, 2014). Its global prevalence ranges from 9%–18% (Hanson et al., 2017), and it afflicts about 48.5 million couples worldwide (Louis et al., 2013). Of these couples, only 56% seek appropriate treatments (Datta et al., 2016). In the Iranian context, infertility is experienced by 10.3%–24.9% of couples (Morshed-Behbahani, Lamyian, Joulaei, & Montazeri, 2020).

Traditionally, childbirth and childbearing have been two of the most prominent roles played by women, which is also the orientation

that drives the idea that infertility is a feminine problem (Hasanpoor-Azghady, Simbar, Vedadhir, Azin, & Amiri-Farahani, 2019). Women's suffering and the pains that they experience because of infertility are considerably more profound and more severe than those borne by men, rendering them highly vulnerable in this regard, ultimately affecting their happiness and well-being (Pour, 2014). The variances in concerns that confront infertile women also stem from the social structure responsible for the pain of infertility and its effects on women's quality of life (Kiani & Simbar, 2019).

The acceptance of any problem in life is a complex process that is influenced by several factors, such as personality traits, personal desires (general needs, emotional needs, coping strategies, expectations about future life, etc.), service availability and affordability,

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culture and familial and societal support (Obiegło, Uchmanowicz, Wleklík, Jankowska-Polańska, & Kuśmierz, 2016; Yao, Chan, & Chan, 2018). In the case of women, one such factor is economic status. Females often cannot afford to pay for infertility treatments on their own and are not financially independent from their husbands—a situation that exposes them to physical, cognitive and emotional changes and dramatic alterations in the quality of their lives (Kitchen, Aldhouse, Trigg, Palencia, & Mitchell, 2017). For example, infertile women experience depression, anxiety and lack of self-confidence (Bokaie, Simbar, & Ardekani, 2015). Despite the high prevalence of infertility, however, most infertile women do not share their concerns with their families and friends, thus causing them apprehension (Rooney & Domar, 2018). Although some studies negated the relationship between anxiety and infertility duration (Maroufizadeh, Karimi, Vesali, & Samani, 2015; Ogawa, Takamatsu, & Horiguchi, 2011), over time, this condition can impose tremendous pressure on women and make them feel ashamed and guilty. Such adverse feelings also disrupt the mental and social development of female populations (Pasch et al., 2016).

To improve the quality of their marital lives and deal with the inability to conceive children, infertile couples adopt several techniques. Some seek spiritual and social support, exert efforts to change existing conditions, adopt problem-solving strategies, disregard the problem and resort to blaming behaviours (Pasch & Sullivan, 2017; Sormunen, Aanesen, Fossum, Karlgren, & Westerbotn, 2018). Managing infertility conditions is an important issue that may lead to successful reconciliation (Oti-Boadi & Asante, 2017). If individuals fail to accept infertility, they will face a crisis in their lives, which might threaten their health (Taebi, Simbar, & Abdollahian, 2018). Evidence has shown that emotional, psychological and social stresses are key issues in coping with infertility and the treatment procedures for it (Kiani & Simbar, 2019). Unfortunately, many societies regard infertility only as a medical issue and disregard the social challenges that arise from it (Hasanpoor-Azghady et al., 2019). Additionally, the inability of infertile females to respond to their concerns about conception reduces their potential to cope with problems (Kiani & Simbar, 2019). They may also face internal (physiological and psychological) and external (environmental and social) pressures, which may disrupt their adaptation (Chachamovich et al., 2010). All in all, these dilemmas place women in a paradoxical situation.

In consideration of the issues discussed above, this qualitative research was aimed at understanding and perceiving the world from the viewpoints of individuals, guided by the recognition that people have different experiences and perceptions of situations (Ritchie, Lewis, Nicholls, & Ormston, 2013). Few studies have been carried out on women grappling with infertility, yet this population is more vulnerable than infertile men. To the best of our knowledge, no investigation has been directed towards how infertile women handle infertility-related concerns and how these affect the quality of their lives and the strategies that they adopt in dealing with their concerns. The present work is an attempt at addressing this gap.

## 2 | METHODS

### 2.1 | Type of research

This is a qualitative study involving a conventional content analysis. Conventional content analysis is generally used with a study design whose aim is to describe a phenomenon, in this case infertile women's understanding about their quality of life. This type of design is usually appropriate when existing theory or research literature on a phenomenon is limited (Hsieh & Shannon, 2005; Kleinheksel, Rockich-Winston, Tawfik, & Wyatt, 2020). Infertility affects women's quality of life and has complex dimensions that raise many questions about the concerns of infertile women and how to deal with them. We decided to address the gap by interviewing infertile people and key informants and putting their opinions together.

### 2.2 | Sample and sample characteristics

The research interviewed 30 participants, among whom 15 were infertile women and 15 were key informants (four husbands, one reproductive health specialist, two obstetrician-gynaecologists, three midwives with work experience in infertility centres, one health policymaker, one health manager and economist, one sociologist, one clinical psychologist and one psychiatrist). The interviews were conducted in Persian. The inclusion criteria for the infertile (irrespective of primary or secondary infertility) women were one-year experience of female infertility diagnosed by a gynaecologist, official and permanent marriage, no foster child, no infertility in the husband and willingness to participate in the research. The inclusion criteria for the key informants were having an infertile wife, holding at least a bachelor's degree, having at least two years of infertility experience and willingness to take part in the study.

### 2.3 | Sampling method

Sampling was performed in a teaching hospital affiliated with Mazandaran University of Medical Sciences and a privately owned infertility centre in Mazandaran Province, north of Iran.

Purposive sampling was carried on until data saturation was reached.

### 2.4 | Data collection

The study used a variety of data collection tools and approaches, namely semi-structured interviews, observation, audio recording, transcription, note-taking during the interviews and evidence documentation. The in-depth interviews began with semi-structured questions (e.g. "What are your concerns about infertility?", "How do you deal with them?"). The process of interviewing with exploratory questions like you might explain more about this? Can you make

this clearer? Explain your experience about the subject or What do you mean? It makes the phenomenon more transparent for the researcher and for the participants themselves. On average, the interviews lasted for 40–55 min and were recorded after obtaining the participants' written consent forms.

## 2.5 | Data analysis

The conventional content analysis was run in accordance with the steps proposed by Grundheim and Lundman. The data collection and analysis were performed sequentially. First, after each interview, responses were typed verbatim on an MS Word document (version 2018) and imported to MAXQDA software (version 10). Second, the transcribed text was divided into semantic units and the concepts reflected in the text were summarized. Third, the semantic units were shortened and given a title using appropriate codes. The coding and interviews were run at the same time. Fourth, the codes were divided into subcategories on the basis of their similarities and differences and then categories were extracted. Finally, themes were extracted on the grounds of the concepts identified in the text.

## 2.6 | Validity and reliability

Lincoln and Guba (Guba & Lincoln, 1994) proposed four criteria for verifying qualitative data, namely credibility, dependability, transferability and confirmability. These criteria were considered in the current work to enhance the accuracy and validity of the study.

### 2.6.1 | Credibility

Credibility refers to the appropriate representation of the social structures under study and a set of measures for improving research results. It encompasses long-term engagement with a field of interest, continuous observations, triangulation, negative sample analysis and the examination of interpretations versus raw data, participants' reviews and peer reviews (Holloway & Galvin, 2016; Speziale, Streubert, & Carpenter, 2011). Correspondingly, the present study involved a longitudinal collection of data, participant evaluations, external reviews, a combination of data gathering techniques and a consideration of the interviewer's skills.

### 2.6.2 | Dependability

Dependability pertains to reliability in quantitative research (Delamont, 2012). To ensure adherence to this principle, the participants in the current work were asked the same questions and open coding and external observer methods were implemented.

### 2.6.3 | Transferability

Transferability indicates the extent to which the findings of a study are validated or applied by another group in another context that differs from the setting where the initial data were collected (Polit & Beck, 2008). The present researchers ensured transferability by using their opinions, precisely documenting steps and reaching agreement with two reproductive health professionals about detected codes, subcategories and categories.

### 2.6.4 | Confirmability

Confirmability is a reflection of agreement between two or more independent individuals as regards the accuracy, relevance and meaning of data (Polit & Beck, 2008). This research strived for confirmability by selecting samples with maximum heterogeneity in terms of age, educational level, employment status, type of infertility, type of treatment, duration of infertility and social status; comparing the findings with those of other studies; and providing a rich description of the qualitative data.

## 2.7 | Ethics approval and consent to participate

Before data collection, approval was sought from the Ethics Committee of Shahid Beheshti University of Medical Sciences [Code: IR.SBMU.PHARMACY.REC.1398.024]. Ethical considerations (i.e. informed consent, objective and procedures of the study, confidentiality and non-disclosure of personal information, voice recording, prevention of financial burden on the participants, the right to withdraw from participation at any point in the study) were explained to the participants.

## 3 | RESULTS

As previously stated, interviews were held with 15 women experiencing infertility (Table 1) and 15 key informants (Table 2). The analysis of the findings contributed to the extraction of the themes relevant to quality of life among infertile women, who are thus living in a paradox of concerns and dealing with them. The findings cast light on two themes, which subsumed four categories, 12 subcategories and 63 codes (Table 3).

### 3.1 | Infertility concerns

The theme "infertility concerns" comprised two categories, namely "concerns" (with the subcategories "current concerns" and "future concerns") and "difficulty and vagueness of treatment" (with the subcategories "difficult treatment" and "vagueness").

**TABLE 1** Demographic characteristics of the infertile women

Characteristics	Mean	SD
Age (year)	33.12	8.09
Duration of marriage	12.30	7.62
Duration of infertility	8.23	6.56
	F	%
Level of education		
Elementary	2	13.3
High school	4	26.7
Diploma	4	26.7
BS	2	13.3
MS	2	13.3
PhD	1	0.7
Place of residence		
City	10	66.7
Village	5	33.3
Economic status		
High	4	26.7
Medium	7	46.6
Low	4	26.7
Type of infertility		
Primary	10	66.7
Secondary	5	33.3
Type of treatment		
Medication	4	26.6
IVF	4	26.6
IUI	4	26.6
Donor eggs	3	20.2

### 3.1.1 | Current concerns

The current concerns harboured by the participants were the economic burdens of the disease, untreated infertility, childbirth, the side effects of injection and the scarcity of medication. All the participants considered economic burdens and childbirth as current sources of concern. The following sentiments were shared by the respondents:

The high treatment cost is one of my concerns since we can't afford it.

(41-year-old housewife, 20 years of primary infertility)

What matters in my life is being a mother and being able to get pregnant.

(35-year-old woman, employed, 8 years of primary infertility)

**TABLE 2** Demographic characteristics of the key informants

Age (year)	Occupation	Level of education	Work experience (years)
64	Policymaker	PhD	39
67	Health manager and economist	PhD	43
45	Sociologist	PhD	16
39	Reproductive health specialist	PhD	11
38	Clinical psychologist	PhD	9
39	Psychiatrist	PhD	10
50	Obstetrician-gynaecologist	PhD	12
42	Obstetrician-gynaecologist	PhD	7
42	Midwife	BS	18
35	Midwife	BS	10
28	Midwife	BS	5
40	Husband	Elementary	–
30	Husband	BS	–
38	Husband	Diploma	–
28	Husband	High school	–

### 3.1.2 | Future concerns

On the basis of the infertile women's experiences, their future concerns were divorce, being rejected by relatives, loneliness in the future, the absence of future generations, damage to foetuses given reproductive techniques, child care, ageing and its impact on infertility and pregnancy complications. Most participants identified fear of divorce and loneliness in the future as the principal issues that they expect to grapple with:

I always think my husband will remarry if I don't get pregnant.

(32-year-old housewife, 14 years of infertility)

I'm afraid that I will never have a child and that my husband and I will be at home alone.

(38-year-old woman, employed, 15 years of primary infertility)

### 3.1.3 | Difficulty of treatment

This category covered the lack of complete recovery following assisted reproductive therapies, the low likelihood of successful treatment, the lack of effective drug treatment and the lack of drugs with no side effects. Most of the infertile women also mentioned the repeatability of treatment: "These techniques should be repeated

**TABLE 3** Final Codes, subcategories, categories and themes associated with infertility concerns and dealing strategies

Final Codes	Subcategories	Categories	Themes						
Economic burdens of disease	Current concerns	Current and Future Concerns	Infertility concerns						
Untreated infertility									
Childbirth									
Side effects of injections									
Scarcity of medication									
Divorce				Future concerns					
Being rejected by relatives									
Loneliness in the future									
Absence of future generations									
Damage to foetuses due to adopted reproductive techniques									
Child care									
Ageing and its impact on infertility									
Complications of pregnancy									
Repeatability							Vagueness	Difficulty and vagueness of treatment	
Complexity of medication consumption									
Doubts in treatment processes									
Lack of complete recovery because of reproductive techniques				Difficulty of treatment					
Low likelihood of successful treatment									
Lack of effective drug treatment									
Lack of drugs with no side effects									
Listening to music	Self-control	Adaptive strategies	Dealing with infertility						
Walking									
Having fun in activities intended to distract attention from infertility									
Learning about treatment success									
Avoiding negative thoughts				Perceived social support					
Mother's sympathy									
Mother's empathy									
Husband's sympathy									
Husband's empathy									
Support by treatment team									
Sympathy from other infertile women									
Empathy from other infertile women									
Empathy from friends									
Sympathy from friends									
Trust in God							Connection with God		
Praying to God									
Approaching God									
Accepting God's decision				Modification of beliefs and attitudes					
Understanding the value of life									
Gradual coping with infertility									
Reforming traditional views of society									
Adoption									

(Continues)

TABLE 3 (Continued)

Final Codes	Subcategories	Categories	Themes
Inability to control oneself	Inability to control the condition	Inhibitors of reconciliation with perceived infertility	
Inability to use medications correctly			
Lack of awareness about treatment processes	Ignorance of spouses and families		
Men's lack of awareness			
Lack of training for men			
Lack of training for family			
Family's lack of awareness	Problems in the structure of health systems		
Lack of public infertility centres			
Lack of an infertility specialist team			
Lack of financial support from the government	Common beliefs in society		
Strengthening marital life through children			
Children as life support			
The misconception that an infertile woman's gaze transmits the disease			
Children as beloved family members			
Society's rejection owing to the inability to bear children			
Infertility as a female issue in society			
Being barren			
Denial of adoption			
Children as assistants			
Similarity with infertile trees			

several times for them to be successful" (38-year-old woman, employed, 15 years of primary infertility).

### 3.1.4 | Vagueness

As indicated by the participants, the vagueness of treatment encompassed repeatability, the complexity of medication consumption and doubts about treatment processes. The greater number of the participants also highlighted the lack of complete recovery stemming from the adoption of reproductive techniques and the low likelihood of successful treatment. Some of the specific comments are as follows:

I have had IVF [in vitro fertilization] twice so far and they have not been successful. I think I will not be treated at all.

(40-year-old woman, employed, 9 years of primary infertility)

They told us that the highest probability rate of success is 30% to 40%. It is too small and I don't know what will finally happen.

(35-year-old woman, employed, 8 years of secondary infertility)

## 3.2 | Dealing with infertility

This category covered two adaptive strategies (with the subcategories "self-control," "perceived social support," "connection with God" and "modification of beliefs and attitudes") and inhibitors of reconciliation with perceived infertility (with the subcategories "inability to control the condition," "spousal and family ignorance," "problems in the structure of the health system" and "common beliefs in society").

### 3.2.1 | Self-control

The participants adopted a variety of techniques in managing their condition, including listening to music, walking, having fun in activities intended to distract attention from infertility, learning about treatment success and avoiding negative thoughts. Most participants mentioned that listening to music particularly makes them comfortable: "Listening to music is what makes me calm down" (20-year-old housewife, 2 years of primary infertility).

### 3.2.2 | Perceived social support

The participating infertile women identified the following issues: sympathy from their mothers and husbands, empathy from their mothers and husbands, support by the treatment team, sympathy

and empathy from other infertile women and sympathy and empathy from friends. A few of the responses are reproduced below:

My mom hugs me and sometimes starts crying when she sees my tears.

(32-year-old housewife, 14 years of primary infertility)

When I talk to my mom, I feel relaxed. I tell my mom everything I need to say.

(42-year-old housewife, 4 years of secondary infertility)

The doctors and staff at the infertility centres do not leave us. I sometimes share my feelings with them and feel comfortable talking to them.

(39-year-old housewife, 12 years of primary infertility)

### 3.2.3 | Connection with God

The infertile women leaned on various ways by which to establish a connection with God, including trusting in God, praying to God, approaching God and accepting God's decision. Most of the interviewees described their experiences in trusting God: "I really trust in God and I used to do the same in the past, but now this feeling is more powerful in me" (40-year-old woman, employed, 9 years of primary infertility).

### 3.2.4 | Modification of beliefs and attitudes

One of the core adaptive strategies used by the infertile women and key informants was to modify their beliefs and attitudes, which entailed understanding the value of life, gradually coping with infertility, reforming traditional views of society and adoption. As a 28-year-old housewife declared about the value of life, "being together is much more important than anything else."

### 3.2.5 | Inability to control the condition

The "inability to control oneself," the "correct use of medications" and the "lack of awareness about treatment processes" were subcategories of the "inability to control the condition." Most of the respondents complained about their inability to exercise control over their predicament:

I don't have much control over myself. I think if I had control over myself, it would be more likely for me to have a successful treatment.

(28-year-old woman, employed, 4 years of secondary infertility)

### 3.2.6 | Ignorance of spouses and families

One of the main barriers to reconciliation with infertility is men's lack of awareness and training as regards the disease and the lack of awareness and training for family members. Some of the specific sentiments about the lack of training among husbands are as follows:

In the infertility center, my husband receives no explanation regarding the treatment process.

(33-year-old woman, employed, 7 years of primary infertility)

One of the critical issues in infertility is to provide training for men.

(reproductive health specialist, 11 years of experience)

### 3.2.7 | Problems in the structure of health systems

The other problems identified by the infertile women were the lack of public infertility centres and infertility specialist teams, long distances from residences to infertility centres and the lack of financial support from the government, which prevented them from reconciling themselves to living with the condition. The dearth of public infertility centres and government support was particularly lamented:

There is only one public hospital in our city. The other hospitals are all privately owned.

(26-year-old housewife, 6 years of secondary infertility)

The concerned organization should be committed to treating each infertile person. The government is in charge of assisting and providing specialized services to the infertile.

(policymaker, 39 years of experience)

### 3.2.8 | Common beliefs in society

Common beliefs in society are also one of the primary concerns of the women as they grapple with infertility. There are subcategories in Table 3.

Most of the interviewed women highlighted "strengthening marital life through children," "the misconception that an infertile woman's gaze transmits the disease" and "society's rejection owing to the inability to bear children" as considerable problems in their endeavours to cope with infertility. The respondents expressed the following opinions:

Children really make one's life everlasting.

(23-year-old housewife, 3 years of primary infertility)



Anyway, there are different beliefs in each family. If I visit a newborn baby, others would feel uncomfortable and would not even show me the baby. They would say that I might make the baby infertile just by looking at him/her.

(30-year-old housewife, 4 years of primary infertility)

If an infertile woman goes to a wedding, people would look at her cruelly, or if she caresses a kid, they would stop her.

(sociologist, 16 years of experience)

In our society, a woman's identity is tied to a child and one's obligation is to be a mother.

(45-year-old housewife, 12 years of secondary infertility)

The findings reflected the occurrence of a paradox in the infertile women's quality of life. Such women exert considerable efforts to tackle the infertility-related problems that they experience using adaptive approaches even as they are also compelled to deal with inhibitors of acceptance.

## 4 | DISCUSSION

This research was the first to examine quality of life among infertile women, who are placed in a paradox of concerns and dealing with them. Traditionally, infertility is considered a feminine issue and womanhood is defined on the basis of motherhood; the failure to conceive is therefore regarded as a major defect (Hasanpoor-Azghdy, Simbar, & Vedadhir, 2014). Women adopt a variety of strategies to manage infertility concerns but in the process also encounter many personal, family, social and cultural issues (Kiani & Simbar, 2019), leading to a silent struggle in regaining control of their lives (Rooney & Domar, 2018). Hence, infertile women are in a paradox of infertility concerns and dealing with them. Although they want to address their concerns and improve the quality of their lives, they continually face obstacles, ultimately forming a paradoxical situation.

### 4.1 | Infertility concerns

The findings revealed that the infertile women harboured concerns that were either associated with the present or the future. Most women wish to be mother and numerous qualitative studies documented motherhood as a fundamental concern of infertile women (Hadizadeh-Talasaz, Latifnejad Roudsari, & Simbar, 2015; Hasanpoor-Azghady et al., 2019). In Yao et al.'s research, for instance, the infertile women's experiences suggested that motherhood and child-rearing are turning points in women's lives and that

childbearing is essential in maintaining marital life and social and family networks (Yao et al., 2018). The pressures to which women are exposed are aggravated by the economic burdens of infertility, the lack of social and economic support, ageing and its impact on fertility, the low likelihood of remarriage for infertile women and the dislike of single life in traditional societies; these challenges incapacitate women in their pursuit of solutions (Kiani & Simbar, 2019). Furthermore, infertile women view their social security as being at risk given the lack of offspring who can take care of them when they grow old or become ill. This issue is also another factor that reduces the quality of life of this group (Gerrits et al., 2017).

Another important point noted in the current participants' experiences were the difficulty and vagueness of treatment. This finding is consistent with that derived by Bokaie et al. (2015), who reported that fear of pregnancy outcomes and treatment responses are some of the causes of worry among infertile females. Similar findings were documented in other studies, which mentioned the low likelihood of successful treatment, the lack of effective drug therapy, treatment repeatability and affordability and the complicated use of medications as potential deterrents to quality of life (Bayar et al., 2014; Hadizadeh-Talasaz et al., 2015; Tao, Coates, & Maycock, 2011). Infertile women struggle with many issues and their failure to respond properly reduces their ability to cope with these problems (Chachamovich et al., 2010; Kiani & Simbar, 2019). In other words, infertile women would benefit from adopting different strategies, but it is important to remember that they encounter internal (physiological and psychological) and external (environmental and social) stresses that may disrupt their adaptation (Chachamovich et al., 2010). In the end, this situation places them in a paradox.

### 4.2 | Dealing with infertility

Self-control is another technique that the respondents use to cope with infertility. Although infertility is a threat to women's lives, its effects largely depend on an individual's ability to respond to the problem. Self-control is an empowering technique; it is a psychological skill that enables women to manage their feelings about infertility and better understand their abilities in handling this matter, ultimately leading to personal comfort (Cunha, Galhardo, & Pinto-Gouveia, 2016). Arslan-Özkan, Okumuş, and Buldukoğlu (2014) and Pasha, Faramarzi, Esmailzadeh, Kheirkhah, and Salmalian, (2013) found that self-control reduces anxiety, depression and stress in infertile women and that it results in enhanced treatment outcomes. In contrast, individuals who have no sufficient knowledge about themselves and their abilities are at risk of failing to complete coping tasks because of weaknesses in their personalities. This may lead to social isolation, which adversely influences the quality of their lives (Cousineau & Domar, 2007).

The respondents likewise depend on social support as an adaptive approach to tackling infertility. People who have access to social support enjoy a higher quality of life and use better coping strategies than do those who do not have such assistance (Martins, Peterson,



Almeida, Mesquita-Guimarães, & Costa, 2014). Infertility has been suggested as a source of social disgrace, thereby threatening self-esteem; under this situation, infertile women with minimal social support suffer from a diminished capability to cope with the disease. These problems are even more pronounced in women than in men (Slade, O'Neill, Simpson, & Lashen, 2007). According to the participants, as well, establishing a connection with God positively affects their quality of life. In a similar vein, other studies highlighted the beneficial role of spirituality on physical and mental health (Seybold & Hill, 2001). A connection with God contributes to individuals' well-being and enhances their ability to effectively carry on amid the challenge of infertility. However, the role of this factor is extensively debated in different societies (Jennings, 2010). In some societies, childbearing is even regarded as a means of achieving virtue (Yao et al., 2018). In Iranian culture, reliance on religious beliefs is one of the strategies for dealing with life problems.

Our findings also pinpointed the lack of awareness among husbands and families as a barrier to dealing with infertility. Cooperation from men and families is a critical determinant of improvements to quality of life among infertile women. The interviewed participants emphasized awareness and training for their husbands and families as the absence of these features might cause a failure to manage the illness. Men's cooperation is a major principle in promoting women's reproductive and sexual health (Kiani, Simbar, Dolatian, & Zayeri, 2018). If men function as women's partners and supporters, we will achieve improved reproductive health indices and therapeutic outcomes and successful programmes accomplished with the joint engagement of men and women (Kura, Vince, & Crouch-Chivers, 2013). Many qualitative studies have also illustrated the positive role of men's engagement in improving women's quality of life and their efforts to adapt to their conditions (Bokaie, Simbar, Ardekani, & Majd, 2016; Hasanpoor-Azghdy et al., 2014; Kohan, Simbar, & Taleghani, 2012; Sharma, 2003). The absence of collaboration from men would lead to psychological crises in women and inappropriate adaptation to infertility (Onat & Beji, 2012).

Yet another major issue that most of the participants contend with are problems with the structure of the health system. In the International Conference on Population and Development in Cairo, infertility was identified as a health priority, yet the disease has been disregarded not only in developing countries but also at most levels of international health management (Widge & Cleland, 2009). This is the kind of underestimation that accounts for the dearth in public facilities, funding, skilled specialists and affordable treatment options (Nachtigall, 2006). Current infertility policies are also inconsistent in terms of treatment and distribution, thus causing the inappropriate allocation of public and private centres (Zuccala & Horton, 2018). In Iran, many policies are exclusively aimed at increasing fertility rates and unfortunately disregard the economic difficulties associated with providing infertility medication and treatment. Current legislation in the country pays no heed to prevention, early diagnosis, referral, early supportive treatment and access to infertility services—deficiencies that curtail the potential to cope with infertility (Morshed-Behbahani et al., 2020).

Common beliefs in society were also identified by the participants as figuring significant in their endeavours to address infertility. In Iran, childbearing is considered a religiously and historically blessed role and childlessness is unpleasant (Abbasi-Shavazi & McDonald, 2000; Bokaie et al., 2015). As explained in a qualitative study by Hasanpoor-Azghady et al. (2019), the infertile encounter several mental and psychological problems posed by society and are the by-product of complicated interactions among social relations, expectations, women's needs, definitions of infertility by society and society's attitudes towards infertility. In Iran, as with many Middle Eastern countries, social, cultural, economic and religious contexts affect attempt at coping because these domains conventionally perceive infertility to be a feminine matter and womanhood is defined on the basis of motherhood; a failure to conceive is thus regarded as a major defect (Hasanpoor-Azghdy et al., 2014). Additionally, gender-based patriarchal beliefs about survival lead to gender discrimination that favours men. The consideration of infertility as an exclusively female problem drives women to perceive themselves as incomplete in comparison with men, thereby doubling the pressure endured by the former (Hasanpoor-Azghdy, Simbar, & Vedadhir, 2015). The major difference between developed and developing societies in terms of childbearing views is that childlessness in developed contexts is seen as a voluntary option for women (Greil, McQuillan, Johnson, Slauson-Blevins, & Shreffler, 2010). Contrastingly, female infertility represents illness and a defective identity in developing nations (Kiani & Simbar, 2019).

As with any other work, the current research has limitations. Its non-generalizability is an issue, albeit this problem is evident in all qualitative studies. In addition, the infertile women might have been unwilling to express reality and their true feelings.

## 5 | CONCLUSION

Quality of life among infertile women lies in a paradox of concerns and dealing with them. These individuals face different concerns and exert efforts to take advantage of social support, establish a connection with God, exercise self-control and modify beliefs and attitudes to cope with infertile-associated challenges. They also face some problems posed by the structure of a health system, the lack of awareness among relatives and husbands, the inability to self-regulate and common beliefs in the community, which reduce their potential to manage the disease. All in all, these matters compel infertile women to live in a paradox, referring to the paradox of being infertile towards achieving a life of quality. Identifying positive strategies for infertile women is crucial to the promotion of their quality of life. In fact, there is a paradox in achieving quality which requires attention and intervention.

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## CONFLICT OF INTEREST

I hereby acknowledge that authors have no conflict of interest.

## AUTHOR CONTRIBUTIONS

All authors made a substantial contribution to writing of the paper draft and met the four criteria for authorship recommended by the International Committee of Medical Journal Editors.

## DATA AVAILABILITY STATEMENT

The data sets used and/or analysed during the current study are available from the corresponding author on reasonable request.

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## REFERENCES

- Abbasi-Shavazi, M. J., & McDonald, P. (2000). Fertility and multiculturalism: Immigrant fertility in Australia, 1977–1991. *International Migration Review*, 34(1), 215–242.
- Arslan-Özkan, İ., Okumuş, H., & Buldukoğlu, K. (2014). A randomized controlled trial of the effects of nursing care based on Watson's Theory of Human Caring on distress, self-efficacy and adjustment in infertile women. *Journal of Advanced Nursing*, 70(8), 1801–1812. <https://doi.org/10.1111/jan.12338>
- Bayar, U., Basaran, M., Atasoy, N., Kokturk, F., Arikan, I. I., Barut, A., & Harma, M. (2014). Sexual dysfunction in infertile couples: Evaluation and treatment of infertility. Sexual dysfunction. *Journal of the Pakistan Medical Association*, 64, 138–145.
- Bokaie, M., Simbar, M., & Ardekani, S. M. Y. (2015). Sexual behavior of infertile women: A qualitative study. *Iranian Journal of Reproductive Medicine*, 13(10), 645.
- Bokaie, M., Simbar, M., Ardekani, S. M. Y., & Majd, H. A. (2016). Women's beliefs about infertility and sexual behaviors: A qualitative study. *Iranian Journal of Nursing and Midwifery Research*, 21(4), 379. <https://doi.org/10.4103/1735-9066.185579>
- Chachamovich, J. R., Chachamovich, E., Ezer, H., Fleck, M. P., Knauth, D., & Passos, E. P. (2010). Investigating quality of life and health-related quality of life in infertility: A systematic review. *Journal of Psychosomatic Obstetrics & Gynecology*, 31(2), 101–110. <https://doi.org/10.3109/0167482X.2010.481337>
- Cousineau, T. M., & Domar, A. D. (2007). Psychological impact of infertility. *Best Practice & Research Clinical Obstetrics & Gynaecology*, 21(2), 293–308. <https://doi.org/10.1016/j.bpobgyn.2006.12.003>
- Cserapes, R. E., Körösi, T., & Bugán, A. (2014). Characteristics of infertility specific quality of life in Hungarian couples. *Orvosi Hetilap*, 155(20), 783–788. <https://doi.org/10.1556/OH.2014.29867>
- Cunha, M., Galhardo, A., & Pinto-Gouveia, J. (2016). Experiential avoidance, self-compassion, self-judgment and coping styles in infertility. *Sexual & Reproductive Healthcare*, 10, 41–47. <https://doi.org/10.1016/j.srhc.2016.04.001>
- Datta, J., Palmer, M. J., Tanton, C., Gibson, L. J., Jones, K. G., Macdowall, W., ... Wellings, K. (2016). Prevalence of infertility and help seeking among 15 000 women and men. *Human Reproduction*, 31(9), 2108–2118. <https://doi.org/10.1093/humrep/dew123>
- Delamont, S. (2012). S. Delamont & R. Emerita Data collection. *Handbook of qualitative research in education*, 1, 1, (123–124). Cheltenham, UK: Edward Elgar Publishing.
- Gerrits, T., Van Rooij, F., Esho, T., Ndegwa, W., Goossens, J., Bilajbegovic, A., & Migiro, S. K. (2017). Infertility in the Global South: Raising awareness and generating insights for policy and practice. *Facts, Views & Vision in ObGyn*, 9(1), 39.
- Greil, A. L., McQuillan, J., Johnson, K., Slauson-Blevins, K., & Shreffler, K. M. (2010). The hidden infertile: Infertile women without pregnancy intent in the United States. *Fertility and Sterility*, 93(6), 2080–2083. <https://doi.org/10.1016/j.fertnstert.2009.08.024>
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. N.K. Denzin & Y.S. Lincoln *Handbook of qualitative research*, (vol. 2, pp. 163–194), 105. Thousand Oaks, CA: Sage Publications.
- Hadizadeh-Talasz, F., Latifnejad Roudsari, R., & Simbar, M. (2015). Decision for disclosure: The experiences of Iranian infertile couples undergoing assisted reproductive donation procedures. *Human Fertility*, 18(4), 265–275. <https://doi.org/10.3109/14647273.2015.1076579>
- Hanson, B., Johnstone, E., Dorais, J., Silver, B., Peterson, C. M., & Hotaling, J. (2017). Female infertility, infertility-associated diagnoses and comorbidities: A review. *Journal of Assisted Reproduction and Genetics*, 34(2), 167–177. <https://doi.org/10.1007/s10815-016-0836-8>
- Hasanpoor-Azghady, S. B., Simbar, M., Vedadhir, A. A., Azin, S. A., & Amiri-Farahani, L. (2019). The social construction of infertility among Iranian infertile women: A qualitative study. *Journal of Reproduction & Infertility*, 20(3), 178.
- Hasanpoor-Azghdy, S. B., Simbar, M., & Vedadhir, A. (2014). The emotional-psychological consequences of infertility among infertile women seeking treatment: Results of a qualitative study. *Iranian Journal of Reproductive Medicine*, 12(2), 131.
- Hasanpoor-Azghdy, S. B., Simbar, M., & Vedadhir, A. (2015). The social consequences of infertility among Iranian women: A qualitative study. *International Journal of Fertility & Sterility*, 8(4), 409.
- Holloway, I., & Galvin, K. (2016). Data Collection and Sampling. I. *Holloway Qualitative research in nursing and healthcare*, 1, 4, (87–117). Hoboken, NJ: John Wiley & Sons.
- Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288. <https://doi.org/10.1177/1049732305276687>
- Jennings, P. K. (2010). 'God had something else in mind': Family, religion and infertility. *Journal of Contemporary Ethnography*, 39(2), 215–237. <https://doi.org/10.1177/0891241609342432>
- Kiani, Z., & Simbar, M. (2019). Infertility's hidden and evident dimensions: A concern requiring special attention in Iranian Society. *Iranian Journal of Public Health*, 48(11), 2114–2115.
- Kiani, Z., Simbar, M., Dolatian, M., & Zayeri, F. (2018). Women's empowerment in reproductive decision-making needs attention among Iranian women. *Iranian Journal of Public Health*, 47(3), 464.
- Kitchen, H., Aldhouse, N., Trigg, A., Palencia, R., & Mitchell, S. (2017). A review of patient-reported outcome measures to assess female infertility-related quality of life. *Health and Quality of Life Outcomes*, 15, 86. <https://doi.org/10.1186/s12955-017-0666-0>
- Kleinheksel, A., Rockich-Winston, N., Tawfik, H., & Wyatt, T. R. (2020). Demystifying content analysis. *American Journal of Pharmaceutical Education*, 84(1), 7113. <https://doi.org/10.5688/ajpe7113>
- Kohan, S., Simbar, M., & Taleghani, F. (2012). Empowerment in family planning as viewed by Iranian women: A qualitative study. *Journal of Biosocial Science*, 44(2), 209–219. <https://doi.org/10.1017/S0021932011000563>

- Kura, S., Vince, J., & Crouch-Chivers, P. (2013). Male involvement in sexual and reproductive health in the Mendi district, Southern Highlands province of Papua New Guinea: A descriptive study. *Reproductive Health*, 10(1), 46. <https://doi.org/10.1186/1742-4755-10-46>
- Louis, J. F., Thoma, M. E., Sørensen, D. N., McLain, A. C., King, R. B., Sundaram, R., ... Buck Louis, G. M. (2013). The prevalence of couple infertility in the United States from a male perspective: Evidence from a nationally representative sample. *Andrology*, 1(5), 741–748. <https://doi.org/10.1111/j.2047-2927.2013.00110.x>
- Maroufizadeh, S., Karimi, E., Vesali, S., & Samani, R. O. (2015). Anxiety and depression after failure of assisted reproductive treatment among patients experiencing infertility. *International Journal of Gynecology and Obstetrics*, 130(3), 253–256. <https://doi.org/10.1016/j.ijgo.2015.03.044>
- Martins, M. V., Peterson, B., Almeida, V., Mesquita-Guimarães, J., & Costa, M. (2014). Dyadic dynamics of perceived social support in couples facing infertility. *Human Reproduction*, 29(1), 83–89. <https://doi.org/10.1093/humrep/det403>
- Morshed-Behbahani, B., Lamyian, M., Joulaei, H., & Montazeri, A. (2020). Analysis and exploration of infertility policies in Iran: A study protocol. *Health Research Policy and Systems*, 18(1), 1–7. <https://doi.org/10.1186/s12961-019-0505-3>
- Nachtigall, R. D. (2006). International disparities in access to infertility services. *Fertility and Sterility*, 85(4), 871–875. <https://doi.org/10.1016/j.fertnstert.2005.08.066>
- Obiegło, M., Uchmanowicz, I., Wleklík, M., Jankowska-Polańska, B., & Kuśmierz, M. (2016). The effect of acceptance of illness on the quality of life in patients with chronic heart failure. *European Journal of Cardiovascular Nursing*, 15(4), 241–247. <https://doi.org/10.1177/1474515114564929>
- Ogawa, M., Takamatsu, K., & Horiguchi, F. (2011). Evaluation of factors associated with the anxiety and depression of female infertility patients. *BioPsychoSocial Medicine*, 5(1), 15. <https://doi.org/10.1186/1751-0759-5-15>
- Onat, G., & Beji, N. K. (2012). Marital relationship and quality of life among couples with infertility. *Sexuality and Disability*, 30(1), 39–52. <https://doi.org/10.1007/s11195-011-9233-5>
- Oti-Boadi, M., & Asante, K. O. (2017). Psychological health and religious coping of Ghanaian women with infertility. *BioPsychoSocial Medicine*, 11(1), 20. <https://doi.org/10.1186/s13030-017-0105-9>
- Pasch, L. A., Holley, S. R., Bleil, M. E., Shehab, D., Katz, P. P., & Adler, N. E. (2016). Addressing the needs of fertility treatment patients and their partners: Are they informed of and do they receive mental health services? *Fertility and Sterility*, 106(1), 209–215.e2.
- Pasch, L. A., & Sullivan, K. T. (2017). Stress and coping in couples facing infertility. *Current Opinion in Psychology*, 13, 131–135. <https://doi.org/10.1016/j.copsyc.2016.07.004>
- Pasha, H., Faramarzi, M., Esmailzadeh, S., Kheirkhah, F., & Salmalian, H. (2013). Comparison of pharmacological and nonpharmacological treatment strategies in promotion of infertility self-efficacy scale in infertile women: A randomized controlled trial. *Iranian Journal of Reproductive Medicine*, 11(6), 495.
- Polit, D. F., & Beck, C. T. (2008). D.F. Polit Developing an Approach for a Qualitative Study. *Nursing research: Generating and assessing evidence for nursing practice*, 1, 9(213–241). Philadelphia, PA: Lippincott Williams & Wilkins.
- Pour, T. H. (2014). The effect of cognitive behavioural therapy on anxiety in infertile women. *European Journal of Experimental Biology*, 4(1), 415–419.
- Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (2013). Designing and selecting samples. K. Metzgir *Qualitative research practice: A guide for social science students and researchers*, 10, 9, (111–142). Thousand Oaks, CA: Sage.
- Rooney, K. L., & Domar, A. D. (2018). The relationship between stress and infertility. *Dialogues in Clinical Neuroscience*, 20(1), 41.
- Seybold, K. S., & Hill, P. C. (2001). The role of religion and spirituality in mental and physical health. *Current Directions in Psychological Science*, 10(1), 21–24. <https://doi.org/10.1111/1467-8721.00106>
- Sharma, A. (2003). Male involvement in reproductive health: Women's perspective. *Journal of Family Welfare*, 49, 1–9.
- Slade, P., O'Neill, C., Simpson, A. J., & Lashen, H. (2007). The relationship between perceived stigma, disclosure patterns, support and distress in new attendees at an infertility clinic. *Human Reproduction*, 22(8), 2309–2317. <https://doi.org/10.1093/humrep/dem115>
- Sormunen, T., Aanesen, A., Fossum, B., Karlgren, K., & Westerbotn, M. (2018). Infertility-related communication and coping strategies among women affected by primary or secondary infertility. *Journal of Clinical Nursing*, 27(1–2), e335–e344. <https://doi.org/10.1111/jocn.13953>
- Speziale, H. S., Streubert, H. J., & Carpenter, D. R. (2011). Managing Data. H.S. Speziale *Qualitative research in nursing: Advancing the humanistic imperative*, 4(63–73). Philadelphia, PA: Lippincott Williams & Wilkins.
- Taebi, M., Simbar, M., & Abdolhian, S. (2018). Psychological empowerment strategies in infertile women: A systematic review. *Journal of Education and Health Promotion*, 7, 68.
- Tao, P., Coates, R., & Maycock, B. (2011). The impact of infertility on sexuality: A literature review. *The Australasian Medical Journal*, 4(11), 620–627. <https://doi.org/10.4066/AMJ.2011.105>
- Widge, A., & Cleland, J. (2009). The public sector's role in infertility management in India. *Health Policy and Planning*, 24(2), 108–115. <https://doi.org/10.1093/heapol/czn053>
- Yao, H., Chan, C. H. Y., & Chan, C. L. W. (2018). Childbearing importance: A qualitative study of women with infertility in China. *Research in Nursing & Health*, 41(1), 69–77. <https://doi.org/10.1002/nur.21846>
- Zuccala, E., & Horton, R. (2018). Addressing the unfinished agenda on sexual and reproductive health and rights in the SDG era. *Lancet*, 391(10140), 2581–2583. [https://doi.org/10.1016/S0140-6736\(18\)30890-0](https://doi.org/10.1016/S0140-6736(18)30890-0)

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