

Original article

What are the needs of infertile Moroccan couples in Assisted Reproductive Technology?: Exploratory qualitative study in the first fertility public center in Morocco

Abstract:

Context: Infertility is one of the most painful experiences that can have a negative impact in many areas of an individual's life. Providing quality care to infertile couples requires health professionals to explore their experiences and needs to plan effective supportive interventions.

Objectives: To explore the experiences and needs of Moroccan infertile couples in Assisted Reproductive Technology. **Material and Methods:** This is a qualitative exploratory study. It involves 40 infertile couples (men and women) and 5 health professionals as key informants. Infertile couples were selected among those attending the first public center for Assisted Reproductive Technology in Morocco located in Rabat during the period 2017-2018. In-depth unstructured interviews, field notes were used with couples and semi-structured interviews with health professionals. The analysis of the interview data was based on a conventional content analysis method. **Results:** Five types of needs were identified among infertile Moroccan couples, namely: **i.** Infertility and social support; **ii.** Infertility and financial support; **iii.** Infertility and spiritual support; **iv.** Infertility and informational support; **v.** Infertility and emotional support.

Conclusion: Infertile Moroccan couples experienced many emotional, psychosocial and economic difficulties that can negatively affect their quality of life. Thus, to meet the needs and expectations of these couples alongside their medical treatment, it's necessary to develop couple-centered approaches, which can improve their quality of life, treatment outcomes and mitigate negative psychosocial consequences.

Keywords: Assisted Reproductive Technology; Infertile couples; Needs; Support; Morocco

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Introduction

In many cultures, having a child is considered as a major social and cultural value¹. Infertility is one of the most stressful and complicated experiences in a

couple's life. It's a real crisis for infertile couples^{2,3}. Infertility is defined by the failure to achieve a natural pregnancy after 12 months or more of regular unprotected sexual intercourse⁴. In the International

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Conference of Infertility in Bangkok in 1998, infertility was defined as a global health problem with physical, psychological and social dimensions⁵. The current prevalence of infertility indicates 9% (of 12 months) in different countries⁶. Infertility can negatively affect social, personal and marital relations leading to divorce⁷. In Morocco, infertility is always a painful experience, especially for the woman who is immediately held responsible. To avoid this stress and life crisis, Assisted Reproductive Technology (ART) is considered as solution⁸. Thus, infertility and its treatment are considered as important medical problems affecting the quality of life of infertile couples^{9,10}. For just over a decade, many studies have demonstrated the need to support these couples during their treatment¹¹. Other studies have shown that infertile couples have a variety of needs^{12,13}. Emotional support, professional psychosocial services are among those needs¹⁴. For this purpose, health professionals are in a good position to support and encourage infertile patients to express their experiences and needs¹⁵. Also, the provision of fertility care must be based on patients' needs and expectations including patient- and couple-centered interventions¹⁶. This is important to promote couples' well-being during treatment and increase their success rates¹⁷. In my Knowledge, this is the first study in Morocco to explore the needs among infertile couples. Qualitative research seems the most appropriate way to explore them more deeply¹³. This will undoubtedly enable health professionals to respond properly to their expectations and improve the quality of their care.

Materials and Methods

Participants and data collection methods

This study was conducted in the first public fertility center in Morocco which is one of the hospitals of the Mohamed V University Hospital Center and the WHO Collaborating Centre at national level and EMRO region. The target population was infertile couples visiting the center from all Moroccan regions during the period 2017-October 2018. This is a qualitative study using a content analysis approach to identify the needs of infertile couples. Rational sampling was used to select study participants included 40 infertile couples (C₁ to C₄₀) and 5 health professionals (PD, P₁, P₂, P₃, P₄) for maximum information. Characteristics of participating couples have been collected; (Table 1).

The inclusion criteria for infertile couples is: a) Moroccan people; b) who have at least one year after marriage; c) agree to participate in study; and

d) have no history of mental disorder. Other criteria for inclusion of participating health professionals were presented in (Table 2). All participants were interviewed for approximately 40 minutes. Unstructured interviews and field notes were used for data collection. The general research questions asked for infertile couples were: 'Tell me about your experience of infertility, your problems with it and your perceived needs'. For further responses clarification, exploratory questions were asked: 'What does this mean?'

Semi-structured interviews were conducted with health professionals, namely: 'In your opinion, what are the problems faced by infertile couples during the care phases?'; 'what are their most important needs?'; 'is the quality of the medical team's behavior important to motivate patients to continue their treatment process?'; 'what are your proposals to improve the care of infertile couples?'. Data collection has been completed as soon as information saturation was obtained. All interviews were conducted in Arabic dialect, recorded, transcribed verbatim, then translated and analyzed simultaneously.

Table 1: Characteristics of participating couples

Couples (C) (Cn.; n =1 to n=40)		WOMEN 40 (100%)	MEN 40 (100%)
Age (years)	27-33	30(75%)	0 (0%)
	34-40	10(25%)	8 (20%)
	41-46	0(0%)	34(85%)
Educational level	Illustrated	2(5%)	0 (0%)
	Primary	18(45%)	8 (20%)
	Secondary	12(30%)	18 (45%)
Infertility type	Superior	8(20%)	14(35%)
	Primary	28 (70%)	
	Secondary	12(30%)	
Infertility cause	Female	16(40%)	
	Male	14(35%)	
	Combined	6(15%)	
Duration of infertility (Years)	Inexplained	4(10%)	
	[3-6]	24(60%)	
	[7-20]	16(40%)	
Steps of care	Diagnosis	18(45%)	
	Traitement	18(45%)	
	Expectation of Pregnancy Outcomes	4(10%)	

Data Analysis

Data analysis followed these steps: a). Transcript of all interviews immediately after each interview, b). Reading the full transcript for general understanding of the content, c). Determination of the number of sense units and primary codes, d). Categorization of similar primary codes into more complete categories;e). Determination of latent content (themes) in data. These steps follow the recommendations of Graneheim and Lundman¹⁸.

Ethical clearance:

The protocol of this research was approved by the Ethics Committee of Medicine Faculty of the Mohamed V University in Rabat under the number: 17/18.The study’spurpose was explained to the couples at the research’s beginning. The written informed consent was obtained from them to record their interviews and they were assured that the data collected would only be used for research purposes. Participants were also informed that they could withdraw the research at any time and that their information would remain confidential during and after research.

Results

Of 40 participating couples (80 patients), women ranged in age from 27 to 41 years with an average age of 31.55 years, while men ranged from 32 years to 48 years with an average age of 41.95 years. Twenty-eight couples (70%) had primary infertility and the rest(Twelve)couples had secondary infertility. The infertility duration varied from 3 to 20 years (average: 6.55 years). Sixteen couples have female infertility; fourteen couples have male infertility, six couples have combined causes and four couples had unexplained infertility. The educational level of couples varied from primary to higher education (university).

Table 2: Characteristics of participating professionals

Health care Professional code	Sex	Nursing category	Number of years of experience
PD	Woman	Gynecol-ogicdoctor	8 years
P1	Woman	Midwif	14 years
P2	Woman	Polyvalent nurse	8 years
P3	Men	Polyvalent nurse	8years
P4	Woman	Polyvalent nurse	10 years

The data analysis distinguished five main categories of needs: **i.** Infertility and social support; **ii.** Infertility and financial support; **iii.** Infertility and spiritual support; **IV.** Infertility and informational support; **V.** Infertility and emotional support. Needs and support was the main them for all categories; **(Table 3).**

Table 3: Themes, categories and subcategories

Theme	Categories	Sub-categories
Needs and Support	Infertility and social support	- Spousal support
		- Family and society support
	Infertility and financial support	- Infertility medical coverage
		- Support from governmental and non-governmental Authorities
		- Belief in God
	Infertility and spiritual support	- Religious up bringing
		- Need for information about the disease and supported circuit
	Infertility and informational support	- Information and education of the family and society
		- Good welcome
	Infertility and emotional support	- Accompaniment
- Reduction of couple stress		

Infertility and social support

Spousal Support

All couples report that the ART process is a very difficult and stressful in the marital relationship. The interviews with these couples revealed different needs, namely: sharing love and compassion, mutual understanding, respect for the partner’s choice of treatment, shared kindness and accompaniment by spouse throughout the treatment process. This led us to deduce that the support of the spouse is strongly requested to encourage the other to overcome this ordeal with strength, confidence and self-esteem.

Two of participating women said:
 ‘When my doctor confirmed my infertility, I was so upset, I felt weak, and I didn’t know how to tell to my husband and what his reaction would be. Fortunately, when he heard the news, he was very understanding and always ready to support me...’ (C₃, C₂₁)

Their husbands’ added respectively:
 ‘Our relationship is stronger to overcome this ordeal. My wife would do the same if I did’
 ‘Infertility is our nightmare, but our love exists so that we can always be in solidarity’

Woman in treatment is usually the most emotionally sensitive, so much so that she monitors her husband’s behavior towards her all the time. She may interpret that her partner reacts selflessly to a different

emotional response. For men, infertility is also difficult. Husbands generally prefer not to talk about the subject and withdraw. Thirty-two women (80%) preferred to be accompanied by their husbands whenever they attended the infertility clinic. Another participating couple said in this regard:

'I like my husband to be with me when I come to the center, I don't want to feel alone, this gives me a feeling of abandonment, but the long waiting time in the room makes him impatient to get to work...' wife of (C₄)

'I understand that it's difficult for her to be alone. I have to go with her to support her, but my boss doesn't tolerate repetitive absences and my wife has to understand my situation...' Husband of (C₄)

However, some couples (C₃, C₁₂, C₁₀, C₁₈, and C₁₅) reported that they preferred to consult alone. One of them stated in this regard:

'I do not want to involve my husband in this problem all the time. I asked my doctor as soon as I left not to inform him. I'd rather bring my close friend back to support me I will gradually pass on the news to my husband. I hope he will accept the situation later...' (C₁₈, C₂₂, C₂₃). The clinical staff participating in the study requires the presence of the couple during the first infertility consultation, since this is a couple matters. The midwife (P₁) said in this regard:

'We make sure that couples adhere in the process of care by giving all the necessary information. This reduces their stress and encourages them to continue treatment'

Another participant explained why her husband refuses to accompany her to the gynecologist's office by saying:

'My husband supports me financially during treatment, but he prefers not to be with me during visits. He thinks it's a women's issue to deal with.' (C₆).

Although (65%) of participating husbands said that infertility would not negatively affect their marital relationships and that their ART attempts were to strengthen this relationship, (70%) of them believe that having children promotes stability in the relationship within the couple. and infertility is a source of tension and divorce. Others participating wives said:

'My husband would one day decide to leave me because I couldn't give him a baby...' (C₇, C₂₅, C₂₆).

We asked the husbands again about this negative women's feeling with infertility, (60%) of them said that it is God's will and that it must be accepted as such. A question of adoption was put to all participating couples, eleven women (27.5%) agreed on the

possibility of adopting in case of failure all attempts at treatment, but seventeen husbands (42.5%) refuse this solution despite the fact that it's quite legitimate by religion. Some husbands of couples (C₈, C₁₁, C₁₃, and C₁₈) justify this by saying that adoption has many risks when the child grows up, he may refuse to be an adopted child.

In This regard the gynecologist (PD) said:

'Our religion does not accept egg donation or gestational surrogacy for these infertile couples or their families...'

1.1.2 *family and social support*

The interviews results showed that (60%) of couples needed family and social support. Important elements were explored through participants' experiences namely: *i.* emotional support from family and friends; *ii.* Respect for the privacy of couples, *iii.* Encouragement to continue treatment, *iv.* Professional support for couples; *v.* The intervention of family in lawin couple's life; *vi.* The social stigmatization of infertility as a pathetic situation. Indeed thirteen couples (32.5%) tried to restrict their social and family relationships, and to avoid certain events such as baptism or wedding celebrations. Some couples declared this:

'Every family reunion, we feel under pressure from our in-laws about our infertility, we feel less valued than other family members who have children. (C₁₆, C₁₉).

'Currently, we have limited our relationships with his family for this cause' (C₁₅) (C₂₉)

'My neighbors always ask me why I don't have children, but I tell them that now is not the time. I had to move because of them. (C₁₀) (C₃₁)

The wives of (C₂, C₄, C₆, C₁₁, and C₁₃) who had male infertility said that they preferred to inform their in-laws of the source of the problem so that they would stop encouraging their husbands to divorce.

(C₁)'swife said:

'At first, our families don't know that the cause of our infertility came from me...my husband explained this cause to them one day.... it was very difficult for me, but he wants to stop blaming him for this infertility...' (C₁)

'We want families and friends stop treating us as poor because we don't have children'. (C₁₄, C₃₀, C₃₄).

In this context, as in others, the lives of infertile couples are greatly affected by the stigmatization of people around them, which mainly poisons women's conjugal relationships and often leads to divorce. One nurse said:

(P₂) said: 'I think family support is very important for couples, but without putting pressure or blaming them'

Another couple expressed the lack of support from their administration to consult, saying:

‘Every doctor’s appointment is a source of stress. it’s difficult to take time off work to consult frequently.’ (C₁₄, C₃₅, C₃₈).

Some couples were annoyed by the negative social perception of infertility, such as God’s misfortune or punishment. Only (15%) of couples are satisfied with their family’s support in continuing treatment. In Morocco, the majority of the population cannot benefit from ART services due to the lack of medical coverage for this disease. Although this public centre has a lower cost than private centers, (85%) of interested couples reported that the financial problem remains a major obstacle to procreation. Another couple was mentioned in this regard:

“We have no money and the family can’t help us. The authorities should support us...”. (C₁₇)

“We were witnesses patients either sacrificed their property to pay for several ART attempts...” (P₃)

‘We want infertility to be treated and ensured by authorities such as cancer and to receive the same level of attention’; (C₁₄, C₁₉, C₂₀, C₃₆, C₃₉)

Infertility and spiritual support

A need for spiritual support, for higher power (God), for faith in His will, for His constant help, for prayer, were among the most frequent statements that were emphasized by almost all participants. 36 couples (90%) said that spiritual support is essential to alleviate the emotional infertility problems. Some couples said:

‘We are sure that we are under the supervision of God’s compassion... We trust that God alone has the power to give us children, ART is only a way...’ (C₉) (C₁₄) (C₁₇)

‘We have cried and depressed a lot, but praying gives us hope and helps us to overcome this suffering. We ask God to help us to accept this trial...’ (C₂) (C₁₁) (C₁₃)

‘I believe there will be hope while my wife is still young to have a child, anyway, it’s God’s will..’, said the husband of (C₄).

Regarding the importance of the religious and spiritual values of infertile couples, another nurse said:

‘The majority of people live with great spirituality, religious beliefs are very fundamental in our cultural context. The mosque always plays a very important role to help people maintain great hope in life, reduce their psychological suffering that is beyond their control. They can find peace.’ (P₄).

Some couples thought their infertility was a trial from God, Two couples mentioned:

‘God is testing us because of a sin we committed in

our past..’ (C₂₀, C₃₇).

Infertility and informational support

The other issue raised by participants during interviews was the need for complete information from medical and nursing staff regarding diagnosis, cost, duration of care, new treatments available and the chances of pregnancy for each processing technology. Raising awareness in Moroccan society about the negative stigma of infertility and the need to educate young people about other aspects of the issue highlighted by participants. In fact, (60%) of couples were satisfied with the quality of the response to their request for information and the follow-up of their care, especially the advice given during the nursing consultation. They said that responding to their need for information decreases their stress, and increases their confidence. Education and provision of information to patients encourages cooperation during treatment.

‘We are so reassured when professionals answer our questions; it helps us to make better decisions...’ (C₁, C₅, C₈)

‘The doctor and nurses inform us about our condition, we will worry less...’ (C₃, C₇, C₁₀). ‘Grâce à la consultation infirmière ma femme a pu faire ses propres injections toute seule le soir’ (C₈, C₁₃, C₃₃, C₄₀) All participating nurses recommended the need to train young people in infertility and raise their awareness before marriage. They add that it is also necessary to sensitize nurses on infertility, in its preventive, curative and management components.

‘We must educate community on this issue through the media, and break the taboo to encourage them to consult before it gets late...’ (PD)

Infertility and emotional support

The couples interviewed expressed a strong need for emotional support along their ART journey (85%), some couples said:

‘The warm welcome of nurses and their support during our care comforts us, health professionals must increase their contacts with us’ (C₂₇), (C₂₈),

The nursing consultation allowed me to improve my relationship with my husband; it was an unforgettable moment of sharing that supported me well and greatly reduces my stress’ (C₃₂)

In this sense, nurses said:

‘We are trying our best to reduce the suffering of couples despite the workload and lack of nurses....’ (P₂, P₃)

Discussion

Our finding showed that spousal support remains as a primary need for reducing couple stress and maintaining their hope in treatment follow-up

especially when family and community support is lacking. This is in keeping with the findings obtained by previous studies conducted on this subject^{19,20}. Thus emotional support for infertile couples is necessary to better manage their marital conflicts by improving their quality of life²¹. It's essential that health professionals consider infertility as a couple's problem rather than a single person's. ²². It can only improve the relationship between spouses²³. Health professionals, especially nurses, must encourage husbands to participate in treatment programs, as well as encourage dialogue, information, education and social awareness about infertility by removing cultural barriers and taboos.

Also, this study has demonstrated the need for couples to support their families in the hope, financial support and strengthening of conjugal relationships. This will have a strong impact through good communication between the couples and their family, but in some cases, this communication is lacking. This is also apparent from a study by Steuber KR and Solomon DH²⁴. Most infertile women preferred to hide their infertility problem from their in-laws' families. This result is consistent with studies results^{12,20}.

Unfortunately, Moroccan society, like Western societies, tends to blame infertility on women, who are often too stigmatized and guilt-ridden for free. This result is very common in other contexts and is consistent with Mollay nez had study's et al²⁵. Other studies have also shown that family support not reduces social infertility problems and infertility stress, particularly among women²², so this is in keeping with our finding. Also, another result of this study showed the lack of support from employers who must take into account the special needs of their infertile employees and helps them to follow their treatment. This result is consistent with that obtained in a study conducted in India by Malpani²⁶. On the other hand, this study found that the lack of financial support as another stressful concern for couples that exceeds their ability to pay. Although the cost of in vitro fertilization in this public centre is 4 times less affordable than in Europe, it remains expensive due to the low socio-economic level of the population and the lack of medical and social coverage. These results are consistent with other studies results^{12,25}. Most diseases are covered by insurance, with the exception of infertility, which is very unfair²⁶. In this regard, the competent authorities and social agencies must intervene to save infertile couples from total distress. Similarly, our findings showed that religious beliefs are strongly present and could

be considered as a source of spiritual support. This coincides with study finding by Dhont et al²⁷. In addition, it has been found that infertile couples have a significant need for information and showed a general couples satisfaction with the information quality provided by health professionals, which is incompatible with the study's results conducted by Van Empel et al¹³. Awareness of society through the media can undoubtedly reduce couples stress and break the taboo of infertility in the Moroccan society. Also results showed that couples expressed a strong need for emotional support throughout the treatment process, particularly at infertility diagnosis and treatment failure; which manifested by anger, guilt, shock²⁸, these results are similar to findings of Souter et al²⁹, where (57%) of patients sought emotional and psychological support.

The strengths of this study are that has interested infertile women and men, which is very useful in infertility studies³⁰. It is also the first study conducted in Morocco to break the taboo around infertility and explore the needs of infertile Moroccan couples.

In conclusion, Infertile Moroccan couples have a great need and support throughout their care journey in ART process. Good infertility management will require the use of holistic care, including couple-centered approaches by nurses and physicians that can improve their quality of life, treatment outcomes and mitigate negative psychosocial consequences. Further research is needed to explore other needs and support particularly with regard to sociological and cultural aspects.

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Ethical clearance:

The ethics committee of the doctoral studies centre of Mohamed V University, Faculty of Medicine and Pharmacy in Rabat considered that the research protocol was in conformity with scientific and ethical principles of research.

Authors' contributions

- ✓ Data gathering and idea owner of this study: **Zaidouni Asmaa**
- ✓ Study design : **Zaidouni Asmaa** and **Rachid Beza**
- ✓ Data gathering: **Zaidouni Asmaa**
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