Satisfaction with Information Provided to Infertile Patients Who Undergo Assisted Reproductive Treatment

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Abstract

Background: Potentially modifiable factors, such as the appropriate informing process given to infertile patients, can affect their infertility knowledge and information. This study aims to assess infertility information provided to Iranians who underwent assisted reproductive treatment.

Materials and Methods: In this cross-sectional study, participants recruited were a convenience sample of all infertile patients who received assisted reproductive treatments from Royan Institute, Tehran, Iran. Inclusion criteria consisted of: patient’s first time visit, no previous infertility treatment failures, and referral to the centre between January and March 2015. A 20-item tool designed by researchers measured patient satisfaction with the infertility informing process. This tool included cause of infertility, type of recommended treatment, diagnostic procedures, approximate treatment duration, success rate of the treatment, approximate cost of treatment, and non-therapeutic factors in treatment success.

Results: A total of 235 infertile patients were invited to participate in the study, from which 200 (100 men and 100 women) participants completely responded to the questionnaire with a response rate of approximately 85%. The mean age of participants was 30.93 ± 5.56 years. In terms of satisfaction with information provided about the cause of infertility, male responders reported the lowest mean score of 3.59 ± 1.05 compared to female responders (3.82 ± 0.85, P=0.078). Infertile women had a greater mean score of 3.85 ± 0.78 than infertile men (3.58 ± 1.29) in satisfaction with information provided about the type of recommended treatment (P=0.037). There was a statistically significant difference between males (3.26 ± 1.04) and females (3.58 ± 0.93) in satisfaction with approximate treatment duration (P=0.031).

Conclusion: According to the results, most infertile patients were satisfied with the informing process related to the cause of infertility and recommended therapies. Information about infertility should be provided more systematically to all treated patients by medical staff, especially in terms of success rate of treatment and financial cost of therapy.

Keywords: Awareness, Health Promotion, Infertility, Information, Satisfaction

Introduction

Infertility is defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse (1). Infertility is a biomedically health problem and a reproductive system disease or dysfunction (2). Some potentially modifiable factors, such as provision of appropriate information to infertile patients, can affect infertility knowledge and information seeking behaviour among people who undergo assisted reproductive treatment.

Health-seeking behaviour among couples with infertility is directly related to their understanding of reproductive biology and their beliefs about infertility. Those with better knowledge of fertility health issues may show improved use of health care resources with a consequent reduction in infertility (3, 4).

Infertility awareness is considered a critical first step towards fertility preservation or infertility care by lifestyle modifications or changes (1, 5). Because fertility knowledge is associated with education, recommended health...
Materials and Methods

This descriptive cross-sectional study was the first phase of a large survey on women and men who undergo infertility treatment in the largest referral fertility clinic in Iran, Royan Institute, where people are examined from all socio-economic and ethnic backgrounds. Participants recruited were a convenience sample of all infertile patients who received first-time assisted reproductive treatments, and who did not have any previous infertility treatment failures. Patients were seen at Royan Institute between January and March, 2015.

In this questionnaire-based study, the researchers developed a tool that was validated on the basis of a literature review. The questionnaire included questions about satisfaction with information about cause of infertility (3 questions); type of recommended treatment (3 questions); diagnostic procedures (3 questions); approximate treatment duration (3 questions); success rate of the treatment (3 questions); approximate financial cost of treatment (3 questions); and non-therapeutic factors in treatment success such as diet, exercise, taking supplements, and cigarette smoking (2 questions) to measure satisfaction with infertile patients’ self-perception of the informing process.

Demographic and clinical information of the participants were gathered from their records in the fertility centre. Question types included yes/no, a 5-point Likert scale that ranged from 1 to 5 (dissatisfied, low satisfaction, neither satisfied nor dissatisfied, satisfied, very satisfied), and choice of one option. The questionnaire was also designed for the Iranian context and validated by a group of 18 gynaecologists, embryologists, meth-
Table 1: Demographic and clinical characteristics of the study participants (n=200)

| Demographic and clinical variables | n (%) |
|-----------------------------------|-------|
| Sex                               |       |
| Male                              | 100 (50) |
| Female                            | 100 (50) |
| Cause of infertility              |       |
| Male                              | 67 (33.5) |
| Female                            | 31 (15.5) |
| Both                              | 54 (27) |
| Unknown                           | 36 (18) |
| No answer                         | 12 (6) |
| Recommended therapies             |       |
| In vitro fertilization (IVF)      | 36 (18) |
| Micro injection                   | 52 (26) |
| Intra uterine injection (IUI)     | 71 (35.5) |
| Other                             | 5 (2.5) |
| No answer                         | 22 (11) |
| Diagnostic procedures             |       |
| Hysteroscopy                      | 14 (7) |
| Ultrasound                        | 95 (47.5) |
| Blood and urine                   | 114 (57) |
| Laparoscopy                       | 7 (3.5) |
| Pap smear                         | 41 (20.5) |
| Genetic counseling                | 10 (5) |
| Hysterosonography                 | 4 (2) |
| Hystrosalpingiography             | 39 (19.5) |
| Sperm motility                    | 73 (36.5) |
| No answer                         | 30 (15) |

In terms of satisfaction with information provided about cause of infertility, male responders reported the lowest mean score (3.59 ± 1.05) compared to female responders (3.82 ± 0.85); there was no statistically significant difference between men and women (P=0.078, Fig.1). Infertile women had a statistically greater mean score (3.85 ± 0.78) than infertile men (3.58 ± 1.29) in satisfaction with information provided about type of recommended treatment (P=0.037). A statistically significant difference was observed between males (3.26 ± 1.04) and females (3.58 ± 0.93) in satisfaction with approximate treatment duration (P=0.031). More than half of the responders obtained their infertility treatment information (causes, therapies, diagnostic procedures, cost, duration, and success rate) from physicians instead of other medical staff (P<0.001, Table 3).

Fig.1: Patients’ satisfaction with the informing process areas (n=200 participants).

Table 2: Description of infertile patients’ satisfaction with the informing process

| Areas                  | Mean | Standard deviation | Minimum | Maximum |
|------------------------|------|--------------------|---------|---------|
| Cause of infertility   | 3.71 | 0.96               | 1       | 5       |
| Recommended therapies  | 3.72 | 0.91               | 1       | 5       |
| Diagnostic procedures  | 3.64 | 0.91               | 1       | 5       |
| Estimated treatment duration | 3.42 | 0.99               | 1       | 5       |
| Success rate of the treatment | 3.39 | 1.11               | 1       | 5       |
| Approximate cost of treatment | 3.31 | 1.1                | 1       | 5       |
| Non-therapeutic factors in treatment success | 3.52 | 1.5               | 1       | 5       |

Table 3: Frequency of information on infertility treatment obtained from medical staff

| Areas                        | Physician n (%) | Nurse n (%) | Midwife n (%) | Reception n (%) | Other n (%) |
|------------------------------|-----------------|-------------|---------------|-----------------|-------------|
| Cause of infertility         | 127 (67.2)      | 9 (4.2)     | 17 (9.0)      | 13 (5.8)        | 23 (12.2)   |
| Recommended therapies        | 117 (65.0)      | 9 (5.0)     | 16 (8.9)      | 11 (5.6)        | 27 (15.0)   |
| Diagnostic procedures        | 126 (71.6)      | 10 (5.7)    | 6 (3.4)       | 15 (8.5)        | 16 (9.1)    |
| Estimated treatment duration | 103 (60.6)      | 17 (10.0)   | 11 (6.5)      | 12 (7.1)        | 24 (14.1)   |
| Treatment Success rate       | 92 (58.2)       | 20 (12.7)   | 18 (11.4)     | 6 (3.8)         | 19 (12.0)   |
| Approximate cost of treatment| 72 (47.7)       | 12 (7.9)    | 6 (4.0)       | 25 (16.6)       | 33 (21.9)   |
| Non-therapeutic factors in treatment success | 94 (58.8) | 12 (7.5) | 7 (4.4) | 18 (11.3) | 27 (16.9) |
Discussion

To the best of our knowledge, this was the first national survey of infertile clients that pertained to satisfaction with information provision in infertility care. Determining the extent of the patients’ satisfaction with information about infertility and its treatment would be beneficial for planning education programs related to the prevention of failures in infertility treatment or withdrawal. The findings of this study have provided useful insights into potentially modifiable factors that influence infertile patient’s co-operation with medical staff in the infertility clinics and compliance with assisted reproductive treatments.

From this study, it was apparent that most infertile patients who participated were more satisfied with the informing process related to the cause of infertility and recommended therapies. In contrast, the vast majority of participants were less satisfied with the information provided for approximate financial cost of their treatment. Overall satisfaction with this infertility care centre was usually high in the survey, but provided no reliable measure for the quality of care (8-10). There were considerable knowledge gaps, particularly in relation to the impact of infertility treatment failure and infertility treatment history in other fertility care clinics.

Of note, those who had a history of infertility treatment were more aware of infertility-related information such as causes, therapeutic procedures, and financial cost. Hence, over-reporting of satisfaction with information provided to the patients was unavoidable. In this study, we attempted to recruit all infertile patients who received assisted reproductive treatments for first time and did not have any previous infertility treatment failures.

Problems exist with the absence of data registration from all Iranian infertility care clinics. However, objective data collection on satisfaction with information provision in infertility care is difficult. This study was in line with most studies that relied on interviews. Possibly, the answers of the respondents were to some extent biased by incorrect recall and self-interest (10, 11). Another limitation of this study was the obvious gender bias towards women in our sample; all women studied acquired higher scores of satisfaction with information provided in all 7 domains compared to the male respondents. It was likely that most infertile women have used the Internet for information on fertility-related problems. Men would be less likely to seek services for infertility than women, and many men from infertile couples do not undergo a male examination (12). Selection bias might occur against people who have a low income or a migration background, which is a common finding in interview studies on assisted reproductive treatment (8, 10).

To the best of our knowledge, we did not find any research that measured satisfaction with infertility treatment information available to infertile people in the literature. Rauprich et al. (10) investigated the views of patients (n=1590) and experts, including physicians (n=230) and psychosocial counsellors (n=66), in Germany on information provision and decision-making in assisted reproduction treatment. Most participants had positive views for information on the chances for treatment success and physical risks of fertility treatment than for information on the risks and burden of multiple pregnancies, and on the emotional risks and burden associated with infertility treatment.

In the present study, both men and women participants were more satisfied with information provided about type of recommended treatment. The objective of another study was to assess patients’ satisfaction with the investigation and initial management of infertility in 1366 women who attended outpatient clinics at 12 hospitals throughout Scotland. Overall, 87% of respondents were satisfied or very satisfied with their care, but there were a number of deficiencies identified.

A total of 86% felt they had not been given enough assistance with the emotional aspects of infertility, whereas 47% felt they were not given a clear plan for the future and 23% of those who had been given drug treatments reported receiving little or no information about the treatment or possible side-effects (11). In the present study, more than half of responders received their infertility information from physicians instead of other medical staff. A qualitative study with 6 group discussions on fertility knowledge and information-seeking behaviour among people of reproductive age revealed that most women and men who intended to have children in the future agreed that primary health care providers, such as general practitioners (GPs), were well placed to provide information regarding fertility and pregnancy health (13).

Despite the remaining limitations and risks of bias, the present methodical strategies have provided sufficient validity for the principal results of the study. The findings are limited to the particular context of fertility care in Iran, and are not transferable or generalizable elsewhere.

Conclusion

Information about infertility should be provided more systematically to all treated patients by medical staff, especially for success rate of treatment and financial cost of therapy. However, most infertile patient participants were more satisfied with the informing process related to the cause of infertility and recommended therapies. Therefore, the information should be clarified for all infertile patients prior to the onset of any therapeutic procedures.

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Authors’ Contributions

Z.E., R.O.-S.; Were the project leaders and responsible for the study conception and design. F.M.; Was involved
in acquisition of data. S.S.; Contributed significantly to the analysis. S.V.; Was responsible for interpretation of the data, and drafted and critically revised the manuscript. All of the authors provided their final approval for the completed manuscript.

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