

Effectiveness of Counseling in the Management of Infertile Patients Undergoing Treatment with Assisted Reproductive Technologies

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ABSTRACT

Background: The objective of this study was to appraise counseling intervention for infertile patients. **Methods:** One hundred sixty-three couples enrolled in the Rajendra Nagar Hospital & IVF Centre, Lucknow, Uttar Pradesh, were asked to participate in this study. Seventy-six couples agreed and were randomized according to a computer-generated random-numbers table into either a routine-care control group or an intervention group. The intervention consisted of three sessions with a counselor: one before, one during and one after the first cycle. **Results:** Significant improvement in the pregnancy rate was observed in the intervention group. **Conclusions:** The results of this study suggest that counseling increases infertile women's chance of becoming pregnant.

Keywords: Stress, distress, effectiveness, counseling, IVF, ART, infertility, pregnancy rates

Two hundred fourteen million women of reproductive age in developing countries who want to avoid pregnancy are not using a modern contraceptive method, still 10-14% of couples suffer from infertility. Infertility is akin to crisis situation, and to any newcomer, the field of assisted reproductive technology (ART) can be confusing and alarming. It could invoke several emotional, spiritual, moral, cultural and ethical issues for the patient. It is possible that the emotional impact of infertility is disregarded and the issue is reduced merely to a biological or medical one. For years altogether, patients have asked for psychosocial support through consumer advocacy organizations, and the same also been suggested by professionals and has been legislated for. Irrespective of a consensus for the need for infertility counseling, patients have largely had to depend on their spouse and family in times of distress, rather than on more formal support resources. There are varied factors that prevent patients from initiating counseling, with the less

distressed patients using their existing resources, while the more distressed ones failing to initiate contact with the counseling service possibly because of not knowing how to do so and also due to cost implications.

Evidence estimates an average rate of 20% for uptake of counseling within the field of infertility. A higher uptake has been noted among participants with higher levels of education, and among those from the middle and upper classes as compared to those from lower social classes. When psychosocial infertility counseling is included in fertility treatment, and its goals and course are explained prior to initiation, acceptance rates can be as high as 80%.

Table 1 summarizes a formula to monitor infertility prevalence in women.

Table 1. Monitoring Infertility Prevalence in Women

Numerator: Number of women of reproductive age (15-49 years) at risk of becoming pregnant (not pregnant, sexually active, not using contraception and not lactating) who report trying unsuccessfully for a pregnancy for 2 years or more x 100

Denominator: The number of women of reproductive age (15-49 years) at risk of becoming pregnant (not pregnant, sexually active, not using contraception and not lactating) who report trying for a pregnancy for 2 years or more

Source: World Health Organization. Sexual and reproductive health. Available at: <https://www.who.int/reproductivehealth/topics/infertility/burden/en/>

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With the introduction of ART, such as *in vitro* fertilization (IVF), the need for counselors in fertility clinics was kindled. Counselors possessed the expertise to conduct pre-treatment psychological assessments that were deemed necessary while selecting the most suitable patients to undergo IVF. At the outset, the role of the counselors focused on pre-treatment screening and social workers with experience in pre-adoption assessment and welfare of child issues took care of the same.

The effect of psychological symptoms on fertility continues to be dubious. It is widely recognized that infertility leads to psychological distress, whether distress contributes to infertility is still debatable. Data suggest that psychological issues adversely affect fertility and a decline in such issues could increase pregnancy rate. Studies have reported lower pregnancy rate with elevated anxiety and depression levels. Standard psychological interventions such as counseling could go a long way in helping infertile couples. The need for psychosocial counseling by a skilled professional in order to ensure comprehensive care in ART was first recognized in the 1980s. Latifnejad Roudsari and Allan suggested in their study that infertility is an issue with many sides to it. Therefore, professionals working with infertile couples need to employ a holistic approach such as counseling that covers all psychological, social and cultural needs of individuals.

METHODS

Inclusion Criteria

Study participants had to be infertile women and men or infertile women only. They must be undergoing treatment with ART such as IVF, intracytoplasmic sperm injection (ICSI), embryo transfer (ET) and intrauterine insemination (IUI).

Interventions consisted of counseling as a psychological face-to-face intervention: (i) designed to influence psychological functioning and (ii) incorporating psychological strategies through interaction. The counseling could be provided using different methods (individual, couple or group) in a variety of settings.

Between February 2016 and January 2018, a total of 163 couples enrolled in the Rajendra Nagar Hospital & IVF Centre, Lucknow, Uttar Pradesh, were asked to participate in this study. Seventy-six agreed and were randomized according to a computer-generated random-numbers table into either a routine-care control group

or an intervention group. Reasons for nonparticipation are depicted in Table 2.

Study Design

Two groups were prepared by a computer-generated random-numbers table. Thirty-six couples were randomized in a routine-care control group, 37 couples into an intervention group, 3 couples did not turn up. During the first week visit, the record chart was completed daily by the women (baseline) and again daily during their first IVF cycle: depending on the ovarian stimulation protocol used, women started monitoring on either the first day of down-regulation (gonadotropin-releasing hormone [GnRH] agonist long protocol co-treatment) or the first day of ovarian stimulation (mild ovarian stimulation using GnRH antagonist co-treatment). Monitoring ended 2 weeks after the day of the pregnancy test and after the third counseling session. On that same day, all participants completed the stress parameter sheet for the second time. Since previous studies have shown that men experience lower levels of distress during IVF treatment than women, male participants did not fill in the record chart.

Interventions

In the intervention group, couples were given three counseling sessions, ranging from 1 hour to 1.5 hours. Similar to a previous study, a pre-treatment (1 week before the first day of pituitary down-regulation or the first day of ovarian stimulation in the case of GnRH antagonist co-treatment), and a post-treatment session took place approximately 2 weeks after the day of the pregnancy test. Additionally, patients received a counseling session 6-9 days after the embryo was transferred. The waiting period is associated with more uncertainty and lack of control than other treatment stages. During the nondirective sessions, couples were invited to discuss their feelings and thoughts on topics related to infertility and IVF treatment. Depending

Table 2. Reasons for Nonparticipation

Motivation	n	%
Lack of awareness	30	34.48
No time for counseling	11	12.64
No need for counseling	18	20.69
Fear	19	21.84
Overly stringent protocol	9	10.34

on the needs of the clients, the counselor alternately used the four basic aspects of infertility counseling: information gathering and analysis, implications and decision-making counseling, support counseling and therapeutic counseling. Counseling was provided by a trained counselor. Instead of being an objective observer, the counselor expresses her own feelings and ideas about the client in order to create new interpersonal experiences for the client. It is assumed that through these personal experiences with the counselors, clients learn how to cope with (inter)personal problems.

Outcome Measure

The outcome measure in this study was pregnancy rate, which was measured through β -human chorionic gonadotropin (β -hCG) test, sonography or both of them. The stress appraisal measure (SAM) was developed and monitored at regular interval and analyzed.

RESULTS

Counseling was initiated to all couples as psychological intervention or cognitive-behavioral therapy in which couples received relaxation training, cognitive restructuring, methods for emotional expression and nutrition and exercise information techniques of stress control.

The couples who completed the program differed significantly from the couples who dropped out in demographics and stress as measured by the record chart at baseline. The biochemical pregnancy rate after the first IVF treatment cycle was 35% for the intervention group and 19% for the control group. This difference was significant.

DISCUSSION

Counseling makes an impact through stress reduction mechanism. Distress is associated with a significant reduction in the probability of conception. Counseling could possibly exert a decreasing impact on stress and enhance the possible chance of pregnancy. This conforms with the results from study by Boivin and de Liz and Strauss that investigated the efficacy of psychological interventions for infertile patients.

Psychological interventions include counseling, educational interventions, relaxation and psychodynamic or analytic interventions. The beneficial impact of such interventions on pregnancy rates needs to be viewed with caution as there is no clear explanation for this effect.

Sexual activity seems to be disturbed in over half of the couples suffering from infertility. Psychological interventions could have a positive impact on sexual behavior and enhance a couples' chances of pregnancy. An increased rate of sexual intercourse following psychological interventions may be associated with an increased rate of pregnancy.

Most women in this study seemed to be able to cope with the procedural distress of their first IVF treatment with the help of a counselor.

In order to draw an inference, it is required to assess the infertile patient's sexual behavior and their mental distress to determine their relative impact on the pregnancy rate. Future studies should determine the association between a couple's frequency of sexual activity and sexual satisfaction and the pregnancy rates.

Clinical Implications

Counseling should be integrated in the treatment of infertility as the present study indicates that counseling is effective in increasing pregnancy rate.

CONCLUSION

The findings of the present study provide some evidence in support of integrating counseling as an early remedial strategy for infertile patients. Counseling appears to increase infertile women's chances of becoming pregnant. On the basis of the results, counseling is beneficial for infertile patients, but more randomized controlled trials are needed.

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Hearing Loss Linked with Dementia Pathology

Hearing impairment was associated with neuropathological hallmarks of dementia, revealed an autopsy study published in *Neurology*. In cognitively normal older adults, impaired hearing was found to be associated with tau neurofibrillary degeneration, reported researchers. Additionally, in people with dementia, hearing loss was associated with micro-infarcts but not to tau tangles. In the study, investigators evaluated 2,755 autopsied participants, 55 years of age and above, from the National Alzheimer's Coordinating Center (NACC) database. About 32% of the participants had impaired hearing. In all, 580 participants were cognitively normal at baseline and 2,175 had dementia. Among the cognitively normal participants, impaired hearing was shown to be associated with higher Braak stage, but not with other pathologies. In those with dementia, impaired hearing had a positive link with micro-infarcts but an inverse association with neuritic plaque density... (*Medpage Today*)

IMA Urges PM to Intervene to Prevent Doctors' Deaths

New Delhi: Overall, 196 doctors in the country have succumbed to COVID-19 thus far, stated the Indian Medical Association (IMA), as it requested PM Narendra Modi for his attention on this crucial issue. A vast majority of the doctors who have lost their lives due to COVID-19 in India have been general practitioners. According to IMA, India has lost 196 doctors, and of these, 170 were above the age of 50 years. General practitioners constitute around 40% of this number. In Delhi alone, 12 doctors have died due to COVID-19, stated IMA. In a letter to the Prime Minister, the IMA requested the government to ensure that doctors and their families get adequate care, and that the state-sponsored medical and life insurance facilities reach doctors in all the sectors... (*ET Healthworld – TNN*)

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Dipropionate 0.025 %) **Cream**

