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REVIEW RESEARCH

The relationship between infertility and psychological factors, depression and anxiety: A review study

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Abstract

Objective: Infertility has always been a common problem in various human societies. Today, the infertility rate is going to rise and a large percentage of couples have infertility problems in the world. Awareness of infertility and long-term treatment affect people's mental health. The main purpose of this study was to investigate the effects of depression on infertility. This study was conducted by reviewing method. To select the content used, first the topics found by the search engine were examined in terms of thematic correlation, and then the obtained content was divided. Using the keywords depression, infertility, and women, it was done from the science direct database, avid, google scholar, pubmed, and 80 articles were obtained, of which 10 were selected for review. A review of findings from infertility studies inside and outside Iran suggests ways to reduce infertility and treat depression, including cognitive-behavioral therapy (CBT) and co-medication, which can help prevent sexual dysfunction and depression, which is effective in treating depression in these patients. Therefore, due to the effects of high depression, especially its effect on ovulation, it is recommended to consider the treatment of depression, which is emphasized in people who are undergoing infertility treatment, to reduce the impact of depression on the treatment process.

Keywords: Depression, Infertility, Women, Psychological factors

Introduction

In recent years, the issue of childbearing and infertility in couples has become a special approach. Having children is very important for couples. For many couples, getting pregnant is an important step, and not being able to get pregnant can lead to pain and suffering in their life (1). According to Bliss, "Infertility is more than just a medical diagnosis, it's a form of social suffering for people" (2009). Infertility is not a one-dimensional phenomenon and can be considered a biological, psychological and social phenomenon, so it cannot be considered as a mere disorder of organ function (2). Bennett says that "Infertility means not being able to conceive despite one year of intercourse and not being able to prevent or conceive successfully" (2009). another definition sys that "Infertility is defined as the failure of a clinical pregnancy after 12 months or more of regular sexual intercourse". (3)

According to the latest statistics (2017), the infertility rate in the world has been about 80 million of all couples. Iran is also facing with this phenomenon and, about 3.4% of couples face infertility according to statistics. (4) The most important and fundamental issue in the infertility follow-up process is the issue of diagnosing and reporting that to couples and their reaction to this problem. Awareness of this problem is usually a stressful factor for couples, and they usually do not have the self-control to manage it. In a study conducted by Abbasi (2016) on infertile couples, he stated that after awareness of infertility, 53 injuries in couples' lives rise in three areas; intrapersonal, interpersonal and transpersonal, as well as in cognitive, emotional, behavioral, biological and environmental dimensions.

In recent years, special attention has been paid to psychological factors in infertility, and medical and psychiatric science confirms the relationship between infertility and psychological factors. (5) Infertility endangers the mental and physical health of couples and exposes them to a variety of psychological disorders. One of the most important of these disorders is depression[2]. Today, in terms of epidemiology, depression and anxiety are at the top of the table of prevalence of psychological disorders affected by infertility in couples. According to the study by Ataya et, al. (2012), the prevalence of depression among infertile women is 74%. (6) Studies have shown that stress and anxiety are more common in infertile women than in fertile women. These studies show that the duration of infertility increases stressors and psychological stress. The longer the infertility treatment lasts and the more successful the experience cause more stressful and depressing the experience. Therefore, anxiety and depression along with psychological problems are more common in people who have had unsuccessful infertility treatments. (7) Studies have shown that couples who have been infertile for three years or more are more likely to experience anxiety and depression than those who have been infertile for one year. There are several ways to reduce infertility and treat depression, which can reduce sexual dysfunction and depression. (9) Therefore, the present study was conducted to investigate the effects of depression on infertility.

Materials and Methods

This study was conducted by reviewing method. The purpose of using the review method is to provide an organized and complete overview of the work done on a research topic in a way that, in this study is the main topic of infertility. To select the content used, the topics found by the search engine were first examined in terms of thematic relevance, and then the resulting content was divided. The criteria for selecting Internet sites (after thematic correlation) was to have the suffix (ac) or the (edu). Using the keywords depression, infertility, and women was done from the science direct database, avid, google scholar, pubmed, and 80 articles were obtained, of which 10 were selected for reviewing.

Results

The findings of this study are based on the review method, the results of which are given below:

One study found that people who were infertile for 2 to 3 years experienced more depression and anxiety than those who were less than 1 and over 6 years old. The peak of depression is during the first 3 years of infertility, and after 6 years, the psychological symptoms were reduced. The first 3 years of infertility are also associated with symptoms

such as anxiety, depression, lack of self-esteem, psychological incompatibility, sexual problems such as lack of orgasm, impotence and marital incompatibility. After a while, the couple's optimistic outlook turns to despair, and eventually their feelings change. Couples who have social support, positive personality characteristics, and good mental health and behavior with their spouse, do not show signs of depression or anxiety. (11)

A study on the characteristics of infertile people was announced: The demographic characteristics of the individuals were such that most of the unemployed participants were 87.5% and employed 1.44% and the average age of the participants was 29-44 years and the economic situation of more than 1⁄3 of the participants was poor and these people had primary infertility; Of course, there were no significant statistics on the underlying factors and there was no relationship between infertility and demographic characteristics. (9)

Prior to treatment, the change in treatment for depression was 1.79 percent, and after treatment, 1.12 percent had no change, and in the control group, 7.38 percent of people with baseline depression improved, and from 19.16% of depression, 2.45% of people who already had depression remained unchanged. (9)

Recent studies have shown that the prevalence of depression in infertile women is 30% and in fertile women is 10%, which manifests its depressive disorders as pessimism, feelings of failure, suicidal ideation, insomnia, obesity, anorexia, etc. (4)

Depression is common after infertility in women, chronic stress caused by infertility reduces the release of sex hormones and prevents ovulation among them. (2)

This period is like a vicious cycle that causes exacerbates infertility, therefore, during and after treatment, especially in failure to treat infertility, patients are reduced in terms of depression on infertility as well as their quality of life. (3)

Also, as studies have shown, infertility treatment includes surgery, intrauterine fertilization, and laboratory fertilization (IVF), and the most recently used method is Shirik or giving gametes (4).

Another study using a self-management questionnaire concluded that depression was more common in infertile women than in fertile women. (5)

Factors such as anger and decreased self-esteem, vision problems, anxiety and depression are considered to be psychological problems that increase infertility in men and women (6). Also, Studies show that depression is more common in infertile blind women than in other infertile women. (5)

With the prevalence of psychiatric illnesses and depression in infertile mammals, the results showed that 28.3% of moderate depression was present in infertile women and 74% of moderate to severe depression in 32% of women who had previously had infertility disorders. (5)

Anxiety, depression and psychological problems are more common in people who have had unsuccessful infertility treatments. (6)

Women are more to be stress than men, and they are more likely to go to medical centers than infertile men. (6)

Infertility in underweight women is 1.5 times higher than in women with moderate BMI, and infertility in women with heavy exercise was 4 times higher than in women with regular exercise. (7)

Insomnia and poor sleep habits affect infertility, for example, the incidence of infertility is significantly higher in men who stay awake more than 3 nights late. (7)

According to the statistics, with increasing age of women, the risk of infertility has changed 0.92 times, and in men it has increased by 0.91 times, so the age of men and women is involved. (7)

The residential area is affected by infertility. For example, a study of people who living in the northern Chinese countryside found that those living in coastal areas were less likely to be infertile than those living in the plains and mountains. (7) It has been emphasized that the number of abortions increases with infertility. (7)

Another factor that affects infertility is cancer treatment methods, including radiotherapy, chemotherapy, and etc.. In a study of 26 clinical trials in the United States and Canada, a group of survivors with 5-year- cancer who previously had malignancies such as leukemia, cns cancer, Hodgkin's lymphoma, non-Hodgkin's lymphoma, tumor, neuroblastoma,

bone tumor and ... have been diagnosed, are now involved in infertility problems at the age of 21. (8) Also, the risk of premature menopause for cancer patients is increased. More than 80 percent of the effects of cancer treatment on infertility have now been reported. (8)

Study of randomized controlled clinical trials conducted in 2015 in the city of Babol, Iran, randomly selected 93 out of 485 participants, who were given one liter of psychotropic drug at a dose of 150 mg per day and given to a group of drugs with a specific dose. The mean depression score in all participants was 70.8, with the drug-tested group showing good tolerance for depression. (9)

Discussion

Studies have shown that depression increases with infertility with accordance to quantitative and qualitative statistics. (5) As getting older, both men and women become more prone to infertility, and anxiety, depression, and psychological problems are more common in people who have had unsuccessful infertility treatments. (6) On the other hand, infertility rates are higher in people undergoing cancer treatment, including chemotherapy and radiotherapy.

To reduce infertility and treat depression, some ways have been suggested to reduce sexual dysfunction and the resulting depression, including cognitive behavioral therapy (CBT) and drug therapy to treat depression in these patients. (9) To reduce infertility and treat depression, ways such as cognitive-behavioral therapy (CBT) and pharmacotherapy have been suggested to reduce sexual dysfunction and depression, that they are effective in treating patients with depression. (9)

Therefore, considering the effects of depression, especially its effect on ovulation, and it is recommended that depression treatment be considered, which is emphasized in people undergoing infertility treatment, to reduce the impact of depression on their treatment process.

Conflict of interest

Authors declare no conflict of interest.

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