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PSYCHOLOGICAL, SOCIAL AND ETHICAL DIMENSIONS OF INFERTILITY: A REVIEW

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Abstract:

Infertility, although not a life-threatening illness, is a life crisis that leads to medical, psychological, social and ethical issues. This article aims to investigate psychological, social and ethical dimensions of infertility, a major problem for women. Infertility can cause couples to have problems in a social and ethical sense besides its reactions such as depression, anxiety, loss and mourning. The society's perspective of infertile couples can lead to emotional problems, sexual dysfunction and deterioration in marital relationships. Social and familial pressures for the continuity of the family line and physical, psychological and economic pressures of assisted reproductive techniques can adversely affect couples. Infertility is an unforeseen condition whose diagnosis takes a long time, causes excessive depression, stress and anxiety and weakens the adjustment mechanism. Infertility affects nearly 10-15% of couples of reproductive age. According to data released by the World Health Organization, it affects about 60-80 million people in the World. In conclusion, infertility is a major life crisis which brings about physical, psychological, social and ethical issues. Therefore, not only the assisted reproductive treatment of infertile couples but also their psychological, social and ethical situations should be considered. Couples undergoing treatment should also be provided counseling by health professionals as part of the routine treatment.

Keywords: Infertility, Women's Health, Psychosocial Dimension, Ethical Dimension.

INTRODUCTION

Infertility is the inability to conceive a child after having unprotected sexual intercourse three to four times a week for a period of at least one year [1-4]. Although not a life-threatening disease, infertility is a social problem which affects the individual, family and society [5,6]. Infertility affects nearly 10-15% of couples of reproductive age [2,7-9]. According to data released by the World Health Organization, it affects about 60-80 million people in the world [10,11].

Infertility is a life crisis leading to personal and family problems with its medical, psychological, social, cultural, ethical, religious and class dimensions [8,9]. Social and familial pressures for the continuity of the family line and physical, psychological and economic pressures of assisted reproductive techniques can adversely affect both couples and health professionals [5]. Therefore, the article was aimed at examining the psychological, social and ethical dimensions of infertility.

PSYCHOLOGICAL EFFECTS OF INFERTILITY

Infertility is an unforeseen, unexplained condition whose diagnosis takes a long time, thus causes depression, and frustration, and weakens the adjustment mechanism. It can also cause reactions in individuals such as shock and disbelief, denial, anger, loss of control, loneliness and alienation, guilt, depression and anxiety, loss and grief [7,12]. The emotional reactions are described as follows:

Shock and disbelief are the first reaction shown by most women/couples. When a couple finds out that they will not have children, all their dreams come to an end [3,13,14].

Denial: The couple may tend to deny the reality by linking the frustration of not conceiving which arises with menstruation every month to the inadequate number of sexual intercourse or to the perception that it is normal not to become pregnant in the first months. If it lasts longer, denial is not a natural reaction anymore and may prevent early intervention [15].

Anger: The main reason for anger is the perception of infertility as "injustice", and the question "why us?" This question leads the couple to consider that they are punished because they have committed such sins as adultery or induced abortions which deserve punishment [14,15]. A person may get angry with himself/herself, his/her spouse, healthcare workers, other pregnant women or women with children and his/her friends [14,16].

Loss of control: Couples can experience loss of control, and anger and resentment due to loss of control because they do not know how to deal with the crisis caused by infertility [13]. Couples may think that their privacy is violated due to infertility tests they have and questions about their private lives [6,15]. Because their daily life is arranged according to appointments with the physician and menstrual cycles, sexuality is not a natural phenomenon anymore; it is something performed under the physician's supervision, which decreases the couple's sexual desire [13,16]. Men may feel that they are a "sperm donor" [13]. They may avoid contacting other family members or friends in order not to make explanations [16]. Especially women may feel lonely at this stage [6].

Loneliness and alienation: Loneliness is one of the troublesome situations in the social environment suffered by infertile individuals [9]. Due to misperception that they will be seen as incompetent by friends who have children and due to fewer topics to share, the couple gets away from people around them. On the other hand, in time, spouses may misunderstand each other and perceive each other as a stranger and thus separations might occur [15]. Such circumstances as alcoholism, depression and suicide attempts can be seen in

people who feel lonely. In a study carried out on the issue, infertile women were reported to have sense of isolation more than men did [9].

Guilt: Usually women suffer feelings of guilt and inadequacy more [13,17]. Women, in general, may feel guilty about their inappropriate sexual life, abortion and contraceptive use in the past [7,11,14]. They may unnecessarily blame themselves because they think that their fault prevents their spouse from becoming a father, or their parents from becoming grandparents [13]. Feelings of accusation and anger may cause the individual to suffer despair and depression [6,10,15].

Depression and anxiety: In several studies, infertile couples are reported to be more prone to depression and anxiety than is the general population [2,7]. Concerns about not being able to get the joy of motherhood/fatherhood the couple has dreamed can cause depression and anxiety. Infertile individuals may suffer anxiety due to several reasons such as concerns about being abandoned by the spouse, fear of undergoing many infertility tests and treatments, idea of losing the love of his/her spouse, and loss of confidence [15]. Guz et al. (2003) conducted a study with 50 people with primary infertility and 50 healthy subjects, and found that women who received negative reactions from her husband, husband's family and other people around experienced anxiety and depression more [17].

A couple who cannot cope with feelings of denial, guilt and anger ends in despair and attempts to commit suicide [12]. The prolonged duration of infertility, frustration, and complex tests and treatment regimens increase anxiety [15]. In Upkong and Orji's study (2006), 42.9% of the infertile women in Nigeria had anxiety and depression [18]. In their study (2011) conducted in a reproductive health center in Japan, Ogawa et al. reported that anxiety increased with age [1].

Couples may feel sexually insufficient due to being infertile, and may become depressed as their joy of and interest in marriage and sexual intercourse are lost [19]. In Sultan and Tahir's (2011) study of fertile and infertile couples, infertile couples' anxiety, depression and aggression levels were higher and self-esteem, marital and sexual satisfaction levels were lower than were those of the fertile couples [20].

Loss and grief: The most important reason for the negative impact of infertility on the mental health of women is the losses experienced in this process. Menstruation is the period of loss which emotionally weakens women and constantly occupies their minds [21]. Because she has not conceived, she can feel sad, which is defined as "the expected grief" [13]. Menstruation process is the loss of dreams, genetic continuity, perception of being fertile, pregnancy experience, childbirth experience, life purpose and breastfeeding experience in women [7]. Menstruation may also be perceived as the loss of control, femininity, close relations, prestige, the body's health, self-esteem, self-confidence, child, identity, future and hope [3,10,17,21].

Couples fall into the acceptance phase. Facts take the place of denial. They start to seek treatment alternatives, to communicate with each other and people around and to display peaceful attitudes and behaviors [6].

SOCIO-CULTURAL EFFECTS OF INFERTILITY

Having a child is related to many factors such as age, gender, marital status, making a childbearing decision freely, culture and beliefs [22]. In societies where womanhood equals motherhood, and manhood equals reproductivity, infertility is considered as an indicator of an individual's sexual identity [19].

Culture which includes the beliefs and values system determines not only sexual behaviors but also all other human behaviors [3]. In many cultures, having children is regarded as one of the major developmental stages of life, and reproductive failure leads to a social stigma [3,19,21,23]. Infertility and sexual dysfunction-related stigmas can vary from one culture to another. In some cultures, infertile women are stigmatized as a "fruitless tree" or "arid land" [3].

Children, in most cultures, are a factor with economic, psychological and social dimensions which gain a person privilege and prestige [11]. Parents start transmitting gender roles and social norms to their children from the moment they are born. For individuals growing up with these cultural transfers, infertility means that women cannot meet society's expectations of motherhood and that man cannot achieve the role of masculinity defined by their culture [21]. As a result of questioning these roles that men and women fail to achieve, they may feel worthless, and they may think that their self-esteem and body image have deteriorated [24,25].

Because motherhood is still the primary role cast for women in society and because women are held responsible for infertility, women carry the burden of infertility to a greater extent and are under social pressure [21,23]. Because in some parts of Turkey infertility is not perceived as a health problem but a woman's fault or deficiency or shame or something to humiliate [23], in those parts, either the woman resigns herself to her husband's having a second wife, or marriages may result in divorce [12,17], as a result of which the woman often becomes despaired and depressed or can be confronted with adverse situations such as violence [11,12,23]. Keskin and Babacan Gümüş's study of infertile women in Turkey (2014), 37.3% of the women were determined to have low self-esteem and a high level of despair [12]. In another study conducted with women with primary infertility, of the respondents, 33.6% were exposed to violence because they were infertile [26].

GENDER DIFFERENCES IN THE PERCEPTION OF INFERTILITY

Men's perception of having children is different from that of women. While psychological values such as parenting sense, sense of being closer to the husband and mothering instinct come to the fore in women, men's motives are as follows: continuity of the family line, economic and traditional values such as expecting their children to take care of them during their old age, freedom and achievement of their purpose [16,23,27]. Although infertility is a biological problem specific not only to women but also to men, throughout history people have attempted to put the blame of this "defect" on the "shoulder" or "womb" of the women [15]. Cultural and physical differences manifest themselves differently in men and women [5,19]. While women talk about their problem more, men may pretend that they suffer the problem less. Women participate in groups where they can share their feelings and seek more information on the issue whereas men keep to themselves and try not to show their emotional distress [16,19]. While symptoms such as depression, anxiety and stress are more common in women, men respond to stress with increased consumption of alcohol. If the infertility is related to male factor problem, men show depressive symptoms too, which leads to psychological distress in the couple [3].

In case of infertility, women make more efforts to solve the problem, because they tend to take on more responsibility and blame themselves. Because infertile women believe that infertility devalues their gender role, that they are stigmatized, that they experience a sense of loss, and that their self-esteem decreases. In a study by Bodur et al. (2013) conducted with healthy and infertile couples, the infertile women reported a decrease in their marital adjustment more

than did the infertile men. However, there was no difference between the healthy group and the infertile group [28].

PROBLEMS EXPERIENCED IN THE ASSESSMENT AND DIAGNOSIS PHASE

The obscurity in the treatment and prognosis of infertility, lengthy diagnostic procedures and infertility tests [29], suffering grief resulting from failing to make decisions regarding treatment options and not being informed adequately, physical difficulties and the pain experienced in the diagnosis and treatment process, feelings of weakness due to not being able to control the prognosis are among the conditions negatively affecting the mental health of infertile couples [3,7,25,27]. Because women experience guilt, stress and responsibility in the diagnosis and treatment process more than men do, they see themselves as "victims". The underlying cause of this feeling is that women undergo a greater number of medical tests even if they are not responsible for infertility and that if they are responsible, hormone supplements they take for treatment cause psychological changes [5,13,19,21].

While waiting for the outcome of the treatment, women may experience complex feelings like anxiety, happiness, hope, despair. Women whose treatment fails although they undergo all these processes may experience such feelings as emptiness, insufficiency, guilt, sadness, failure and frustration, and can show a severe grief reaction [21,25]. Moreover, treatments to promote reproductive health are one of the most stressful events in their life and thus they suffer more depression during this period [7,21,25]. In Volgsten et al.'s study (2008) conducted with couples undergoing in vitro fertilization therapy, 30.8% of the women and 10.2% of the men were diagnosed with a psychiatric disorder, and 26.2% of the women and 9.2% of the men experienced an affective disorder [30]. In Peterson et al.'s study (2007) conducted with people undergoing infertility treatment, the women experienced infertility-induced sexual anxiety and stress more than did men [29]. Wischmann et al. (2012) conducted a 10-year study on factors affecting couples after treatment and determined that 30% of the couples were unable to conceive. The self-esteem of couples who have children through the assisted reproductive technology have been determined to be higher than that of childless couples and to agree to have the infertility treatment again than childless couples [31].

Psychological stress caused by infertility and its results also affects the result of the treatment, pregnancy and live birth rates significantly. Anxiety and stress cause ovulation problems and spontaneous abortions in women and can cause oligospermia in men. Anxiety and stress also affect the treatment results as well as the decision to continue treatment [3,6].

GENERAL ETHICAL ISSUES RELATED TO INFERTILITY AND ITS TREATMENT

The assisted reproduction techniques used to treat infertility bring about some ethical issues too. Among general ethical issues are production of embryos in a laboratory setting, ethical uncertainty related to human preembriyo, elimination of gender roles in the family, and paternity. Another general ethical issue is that sexual intercourse is not a prerequisite for reproduction. Among other general ethical issues are the production of embryos more than needed, selection of healthier embryos, donation of unused embryos to other people, donation of unused embryos for research, uncertainty about the disposal of unused embryos, selection of sperm-ovum-gamete donors and selection of embryos by gender [32]. Each of these ethical issues is a topic to be dealt with in separate articles. In the present study, they are mentioned from a very general perspective.

That human life and human dignity have the right to equal protection and that the human embryo is a potential human being makes these issues even more important. Therefore, when the assisted reproductive technology is used, determinants such as the structure, law system, customs, beliefs and values of the society should be taken into account. Society's putting the responsibility of infertility on women's shoulders creates important issues in terms of human rights and autonomy of an individual. Another issue is that assisted reproductive technology is expensive and limited. Today, the fact that not everybody can access this service may cause inequality in terms of reproductive rights. Another issue is that the assisted reproductive technology gives people the opportunity for gender selection. It also makes eugenic practices possible, which leads to discrimination against other people with disabilities. In particular, arguments that eugenic practices will cause the creation of individuals who are not unique but a copy of others and thus genetic diversity will be reduced take the top place on the agenda [32,33].

Another ethical problem posed by the assisted reproduction techniques is that a larger number of eggs are fertilized to promote the chances of pregnancy, which creates dilemmas such as increased risk of multiple pregnancy, donation of these embryos to other people, use of these embryos for research or disposal of them. When a donor donates more than one egg or sperm or when a sperm bank is established, we can face such problems as sibling marriages and paternity. Another problem is gametes or sperms may become a marketing material. Another issue to be discussed is whether it is appropriate for unmarried couples to benefit from assisted reproduction techniques. This will require a re-questioning of the family structure in society and will have negative psychological effects on individuals. Another concept to be discussed is surrogate motherhood. In this case, a third person becomes involved in pregnancy and the following issues come to the fore. What are the rights of surrogate mothers? Between whom will the kinship link be established: between the child and the surrogate mother or between the child and the genetic mother? Another issue is the concept of motherhood [32].

In Turkey, sperm and ova banks, and surrogacy are not allowed and unmarried women cannot benefit from the assisted reproductive technology legally. The Assisted Reproductive Treatment Services Regulation does not allow the transfer of more than three embryos. However, in obligatory cases such as age and/or embryo quality, it is allowed. If both of the spouses agree, embryos can be frozen and stored for five years. Article 17 of the Regulation prohibits the storage and transport of the tube baby for the wrong purposes. The article also prohibits the sale of the tube baby. However, due to the lack of sanctions on what to do when someone gets embryos from sperm and ova banks abroad, the growth of reproductive tourism cannot be prevented [34].

The general view on the issue is that treatment-aimed reproductive interventions should be differentiated from non-treatment-aimed reproductive interventions. In this context, the primary concern in assisted reproduction techniques should be not to cause any harm to the child to be born and the parties involved in reproduction. Family structure should be preserved within moral limits not to adversely affect parent-child relationships. Assisted reproductive techniques should not serve for eugenic practices. Reproductive rights should be based on respect for life and individual in harmony with the rights of the family, embryo, fetus, and child. When assisted reproduction techniques are implemented, the health of the parties and principles of justice and respect for autonomy

should be protected. In the implementation of assisted reproductive technologies, not commercial purposes but humanitarian purposes should have the priority. Couples should be informed on this issue, their consent should be obtained and their autonomy should be protected [35].

APPROACHES TO INFERTILE COUPLES

Infertility treatment is a difficult process with medical, emotional, social, legal and ethical aspects and it should be thoroughly discussed by couples [10,36]. In this process, an individual-centered multidisciplinary care and counseling is important. The goal of the therapeutic intervention in the counseling process is to raise women's awareness of their identities and self-esteem, to enable them to have the control over their lives, to face the consequences of infertility, to strengthen the relationships between the couple, to help them to make informed decisions about the course of the treatment, and to resolve problems before they become crises [4,7,37].

During the infertility treatment process, health professionals should evaluate the couple with a biopsychosocial approach and recommend them the appropriate care in accordance with the problems identified [12]. The healthcare provided should ensure the minimization of the effects of medical and physical events suffered by the infertile couple. By informing them about the treatment, health professionals should raise their awareness of the treatment and help them confront with the results of the treatment in a healthy way. Thus, individuals are enabled to cope with such feelings as anxiety, loneliness and loss of control in a positive way [7]. Within the scope of infertility counseling, health professionals should evaluate couples, educate them on issues they need to be aware of, be able to identify their stress, anxiety and depression levels and be able to use therapeutic counseling models [4]. The nurse/midwife should correct the infertile couple's false or incomplete knowledge of reproductive system, anatomy, physiology, infertility treatment and stages of the treatment [23]. Provision of necessary information plays an important role in their participation in decision-making and treatment processes [36,37]. Enlightenment of the couple can ensure the establishment of communication between the couple and health professionals. It can also help the couple to express their feelings through their participation in the process and to confront with the disappointment they experience [7]. The information given should be clear, understandable, brief and to the point. Sometimes the information should be given in writing [36]. In a study conducted with 268 couples undergoing fertility therapy (2012) investigating whether the participants received preconception counseling, the couples were determined not to have received adequate counseling on lifestyle, nutrition, healthy sexuality, psychosocial aspects of infertility, procedures in the treatment, and adverse effects of the treatment [38].

Health professionals should not only support the emotional well-being of the infertile couple but also create a comfortable environment, establish an effective communication with the couple, be sensitive to changes in their life, care for their individuality, and receive feedback. If necessary, health professionals should encourage the couple to receive psychologic counseling or refer them to a psychiatrist [4,37,39]. Depending on the needs of individuals, different therapeutic approaches such as psychotherapy, family therapy, group therapy, cognitive-behavioral therapy, sex therapy, deep breathing and relaxation techniques, techniques to cope with stress and participation in support groups may also be implemented [7,10]. A successful counseling may provide psychological support during the grieving process of the couple whose treatment failed or in planning a childless life for them [7]. Health professionals should also evaluate the couple's beliefs, coping styles, strengths and weaknesses, and determine the couple's expectations of the treatment process, discuss ethical issues with the couple and defend the couple's rights [4,13,37].

CONCLUSION

In conclusion, infertility is a major life crisis which brings about physical, psychological, social and ethical issues and leads to individual and family problems. Therefore, not only the assisted reproductive treatment of infertile couples but also their psychological, social and ethical situations should be considered. Couples undergoing treatment should also be provided counseling by health professionals as part of the routine treatment. Reproductive rights should be dealt with by considering the rights of the family, embryo, fetus and children and by respecting individuals involved.

Points worth stressing in the present manuscript are summarized in Table 1.

REFERENCES

[1] Ogawa M, Takamatsu K, Horiguchi F. Evaluation of factors associated with the anxiety and depression of female infertility patients. *Biopsychosoc Med* 2011; 5: 1-5. http://www.bpsmedicine.com/content/5/1/15.

[2] Deka PK, Sarma S. Psychological aspects of infertility. *BJMP* 2010; 3(3): a336.

[3] Pacheco Palha A, Lourenço MF. Psychological and cross-cultural aspects of infertility and human sexuality. *Adv Psychosom Med* 2011; 31: 164-183. doi: 10.1159/000328922.

[4] Aşçı Ö, Kızılkaya Beji N. Infertility counseling. *İ.Ü.F.N. Nurs J* 2012; 20 (2): 154-159.

[5] Güleç G, Hassa H, Yalçın EG, Yenilmez Ç. The effects of infertility on sexual functions and dyadic adjustment in couples that present for infertility treatment. *Turk Psikiyatri Derg* 2011; 22 (3): 166-176.

[6] Kırca N, Pasinlioğlu T. Psychosocial Problems during infertility treatment. *Current Approaches in Psychiatry* 2013; 5 (2): 162-178. doi: 10.5455/cap.20130511.

[7] De Berardis D, Mazza M, Marini S, et al. Psychopathology, emotional aspects and psychological counselling in infertility: A review. *Clin Ter* 2014; 165 (3):163-169. doi:10.7417/CT.2014.1716.

[8] Kazandi M, Gunday Ö, Mermer TK, et al. The status of depression and anxiety in infertile Turkish couples. *Iran J Reprod Med* 2011; 9 (2): 99-104.

[9] Kavlak O, Saruhan A. A study on determination the loneliness level in infertile women and to assess the factors that effect the loneliness level. *Ege Medical Journal* 2002; 41 (4): 229-232.

[10] Priyanka NJ, Reddy J. Psychosocial aspects of infertility. *Indian Journal of Applied Research (IJAR)* 2013; 3 (8): 634-636. doi: 10.15373/2249555X.

[11] Cousineau TM, Domar AD. Psychological impact of infertility. *Best Pract Res Clin Obstet Gynaecol* 2007; 21 (2): 293-308. doi: 10.1016/j.bpobgyn.2006.12.003.

[12] Keskin G, Babacan Gümüş A. Infertility: An examination hopelessness perspective. *J Psy Nurs* 2014; 5 (1): 9-16. doi:10.5505/phd.2014.07269.

[13] Pressman PF. Psychological aspects of infertility. 2009; 1 (2): 21. www.pressmanandassociates.com/Infertility.pdf. Date of access: 20.03.2016.

[14] Klock SC. Psychological issues related to infertility. *Global Library Women's Medicine* 2011; www.glowm.com/.../Psychological%20Issues. Date of access: 28.03.2016.

[15] Sezgin H, Hocaoğlu Ç. Psychiatric aspects of infertility. *Current Approaches in Psychiatry* 2014; 6 (2): 165-184. doi: 10.5455/cap.20131001091415.
[16] Oğuz HD. İnfertilite tedavisi gören kadınlarda infertilitenin ruh sağlığına, evlilik ilişkileri ve cinsel yaşama etkileri. Bakırköy Prof. Dr. Mazhar Osman Ruh Sağlığı ve Sinir Hastalıkları Eğitim ve Araştırma Hastanesi. Uzmanlık Tezi, 2004.
[17] Guz H, Ozkan A, Sarisoy G, et al. Psychiatric symptoms in Turkish infertile women. *J Psychosom Obstet Gynaecol* 2003; 24 (4): 267-271. doi:10.3109/01674820309074691.
[18] Upkong D, Orji EO. Mental health of infertile women in Nigeria. *Turk Psikiyatri Derg* 2006; 17 (4): 1-7.
[19] Vural PI, Kızılkaya Beji N. Psychosexual effects of infertility problems. Androloji Bülteni 2014; 57: 135-138.
[20] Sultan S, Tahir A. Psychological consequences of infertility. *Hellenic Journal of Psychology* 2011; 8: 229-247.
[21] Karaca A, Ünsal G. The effects of infertility on women's mental health and role of psychiatric nursing. *J Psy Nurs* 2012; 3 (2): 80-85. doi: 10.5505/phd.2012.02486.
[22] Fisher JRW, Hammarberg K. Psychological and social aspects of infertility in men: An overview of the evidence and implications for psychologically informed clinical care and future research. *Asian J Androl* 2012; 14 (1): 121-129. doi: 10.1038/aja.2011.72.
[23] Kılıç M, Ejder Apay S, Kızılkaya Beji N. Infertility and culture. *İ.Ü.F.N. Nurs J* 2011; 19 (2): 109-115.
[24] Schmidt L. Infertility and assisted reproduction in Denmark. *Dan Med Bull* 2006; 53 (4): 390-417.
[25] Cwikel J, Gidron Y, Sheiner E. Psychological interactions with infertility among women. *Eur J Obstet Gynecol Reprod Biol* 2004; 117 (2): 126-131. doi:10.1016/j.ejogrb.2004.05.004.
[26] Yildizhan R, Adali E, Kolusari A, et al. Domestic violence against infertile women in a Turkish setting. *Int J Gynaecol Obstet* 2009; 104 (2):110-112. doi:10.1016/j.ijgo.2008.10.007.
[27] Şen E, Bulut S, Şirin A. To examine of dyadic adjustment on primary infertile women. *İ.Ü.F.N. Nurs J* 2014; 22 (1): 17-24.
[28] Bodur NE, Coşar B, Erdem M. The relationship between dyadic adjustment with demographic and clinical variables in infertile couples. *Cukurova Med J* 2013; 38 (1): 51-62. doi: 10.5455/cutf.25593.
[29] Peterson BD, Newton CR, Feingold T. Anxiety and sexual stress in men and women undergoing infertility treatment. *Fertil Steril* 2007; 88 (4): 911-914. doi:10.1016/j.fertnstert.2006.12.023.
[30] Volgsten H, Skoog Svanberg A, Ekselius L, et al. Prevalence of psychiatric disorders in infertile women and men undergoing in vitro fertilization treatment. *Hum Reprod* 2008; 2 (9): 2056-2063. doi: 10.1093/humrep/den154.
[31] Wischmann K. Korge T, Scherg H, et al. A 10-year follow-up study of psychosocial factors affecting couples after infertility treatment. *Hum Reprod* 2012; 27 (11): 3226-3232. doi: 10.1093/humrep/des293.
[32] Arda B, Şahinoğlu Pelin S, Çangır Kayı A. Yardımcı üreme tekniklerinin (IVF'nin) getireceği tıbbi etik sorunlar. *J Med Ethics* 1993; 1 (1): 53-56.
[33] Yalım Y. İnfertilite ve etik. https://www.google.com.tr/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=infertilitede%20etik%20sorunlar Date of access: 18.05.2016.
[34] Metin S. Biyotıp etiği ve hukuk. On iki Levha Yayıncılık, İstanbul. 2010; pp:1-541.
[35] Örnek Büken N. Üremeye yardımcı tedavi (ÜYT) uygulamaları ve üremeye yardımcı tedavi merkezleri hakkında yönetmelik ile ilgili bazı çıkarımlar. www.huksam.hacettepe.edu.tr/Turkce/.../uremeye_yardimci.doc. Date of access: 29.06.2016.
[36] Mounce G. An overview of information giving in fertility clinics. *Hum Fertil* 2013; 16 (1): 8-12. doi:10.3109/14647273.2012.755571.
[37] Güngör İ. İnfertil çiftlerde eğitim ve danışmanlık süreci hemşirelik yaklaşımı. *1. Üreme Sağlığı ve İnfertilite Hemşireliği Semineri, Acıbadem Kadıköy Hastanesi* 2012. Date of access: 20.03.2016.
[38] Nekuei N, Nasr Esfahani MH, Kazemi A. Preconception counseling in couples undergoing fertility treatment. *Int J Fertil Steril* 2012; 6 (2): 79-86.
[39] Denton J, Monach J, Pacey A. Infertility and assisted reproduction: Counselling and psychosocial aspects. *Hum Fertil* 2013; 16 (1): 1. doi: 10.3109/14647273.2013.781335.

Table 1. Main points that need to be focused on:

- Infertility is a life crisis affecting couples.
- Psychological, social, medical, social, legal and ethical aspects of infertility should not be overlooked.
- Compared to their husbands, women suffer stress, anxiety, social isolation and depression more during the diagnosis and treatment process.
- Infertile women may feel worthless, their self-esteem and body image may deteriorate, and they may sink into despair and attempt to commit suicide.
- Insufficiency in reproduction can cause social stigma, which adversely affects individuals' physical, emotional, sexual and social well-being.
- During the diagnosis and treatment process, the relations between spouses may deteriorate and they may have sexual problems.
- The stress level experienced during treatment can cause the couple to leave the treatment or may cause a failed pregnancy.
- Reproductive rights should be dealt with by considering the rights of the family, embryo, fetus and children and by respecting individuals involved.
- In the implementation of assisted reproductive technologies, not commercial purposes but humanitarian purposes should come to the fore.
- Among general ethical issues are the production of embryos in a laboratory setting, ethical uncertainty related to human preembriyo, elimination of gender roles in the family, paternity, production of embryos more than needed, selection of healthier embryos, donation of unused embryos to other people, donation of unused embryos for research, uncertainty about the disposal of unused embryos, selection of sperm-ovum-gamete donors and selection of embryos by gender. Another ethical issue is that sexual intercourse is not a prerequisite for reproduction
- During the infertility treatment process, health professionals should evaluate the couple with a biopsychosocial approach.
- Throughout the treatment process, providing information about infertility and the treatment process, and giving psychologic counseling and support can ensure the continuation of the treatment process, and can reduce the severity of anxiety, stress and depression.
- If the couple experience anxiety and depression, they should be encouraged to receive professional help from psychologists or psychiatrists.