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The effect of face-to-face and telephone counseling on the desire for adoption in infertile couples

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Abstract:

BACKGROUND: Fertility is always one of the most important functions of the family. Having a child equals growing up and entering the adult world. Adoption is one of the methods that can be considered to treat infertility. One of the duties of health professionals, especially midwives, is to advise and educate infertile people, which helps them in a way beyond medical treatment. Therefore, this study was conducted to determine the effect of face-to-face and telephone counseling on the desire for adoption in infertile couples.

MATERIALS AND METHODS: The present study was a two-group counseling intervention study that was performed on 34 infertile couples referred to Mashhad Infertility Center. Infertile couples were randomly assigned to face-to-face and telephone counseling groups. All participants completed the Adoption Questionnaire at the beginning and end of the study. Data were analyzed by spss16 software.

RESULTS: The mean score of propensity to adopt in the face-to-face counseling group 2 weeks after the intervention was significantly higher than before the intervention. Furthermore, the mean score of desire for adoption in the telephone counseling group increased significantly 2 weeks after the intervention compared to before ($P < 0.001$). Adoption scores varied in the face-to-face counseling group at 3.15 and in the telephone counseling group at 3.23. There was no statistically significant difference between the two groups ($P < 0.885$). The most common reason for not wanting to adopt was hope for self-treatment and having children (70.6% women and 67.6% men). The most common reason for accepting an adopted child was the strong need to have a child (23.5% in women and 23.5% in men).

CONCLUSION: According to the results of this study, counseling can increase people's awareness of the conditions of adoption and thus increase the desire of people to accept the adopted child. For this reason, considering adoption counseling sessions for infertile couples who have been receiving infertility treatment for a long time but have not become pregnant can help the couple decide.

Keywords:

Adoption, counseling, infertility

Introduction

Fertility is one of the most important functions of the family. In all cultures, husbands and wives consider themselves imperfect if they are unable to conceive, and the attainment of parental role is considered a basic condition for personal perfection, social acceptance, the fulfillment of sexual identity, and the full status of

adulthood. For this reason, infertile couples spend a lot of effort in diagnosing and treating infertility. In Iran, due to cultural characteristics, the issue of fertility is very important. Psychological and social contexts and conditions also add to the importance of this issue and turn it into a psychological and social crisis for the individual.^[1] The use of assisted reproductive techniques has always been a controversial issue. In Iran, there are many challenges to using assisted

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reproductive techniques. One of these challenges in cases of male infertility is the refusal to accept sperm donation because it is not accepted by the law. On the other hand, in many cases, embryo donation is recommended for infertile couples. On the other hand, embryo donation is one of the most challenging issues because the health, social and economic issues of the donor, confidentiality of information and the possibility of intergenerational generation and genetic problems are among the issues of concern to fetal donors and recipients.^[2] Therefore, adoption is one of the methods that can be considered to treat infertility.^[3] Adoption or childcare is an alternative model for couples whose medical treatment has failed or who have decided to discontinue infertility treatment for various reasons. Adoption includes both the joys and hardships of parenthood and the opportunity to share life with a child who needs a parent.^[4,5] Adoption adopts the psychological effects of infertility in infertile couples^[6] and has a significant effect on repairing their damaged mental dimensions.^[7,8] Studies comparing people with and without children who have studied the effect of the presence of children on the health of infertile couples show that self-esteem and mental health are lower in infertile couples without children.^[3] Couples who have adopted children are less likely to be affected by infertility conflicts and receive more emotional support.^[9,10]

Adoption is a secondary choice for infertile couples and society.^[4] When people become aware of their infertility problem, up to 80% of them make the first decision about medical treatment. Such a decision is made shortly after diagnosis.^[11] However, subsequent options such as complementary and alternative therapies, adoption, and childcare are considered by infertile couples over a long period.^[12] Health professionals, especially midwives, whose duties include advising and educating infertile people,^[13] can help in ways beyond medical treatment. Psychological support and introduction of all possible methods, including adoption, to infertile couples are helpful when frustration overwhelms them and they are unable to make decisions.^[3] Counseling is a unique and specialized flow between two people. In the counseling process, the clients with the help of the counselor investigate and analyze their problem and after recognizing the vague and unknown cases, try to change the unknown and disturbing factors to provide a happier and more desirable life for themselves.^[14] Infertility counseling is done in a variety of ways, including individual counseling, couple counseling, family support, and group therapy. The purpose of counseling a couple is to strengthen their ability to cope with infertility and mourning for the losses that both parties have faced. Other goals of counseling couples include: reducing potential conflicts and tensions resulting from treatment, improving the couple's relationship with each other

and with physicians, and support for possible lifestyle changes, creating the right perspective on treatment and alternatives.^[15] Face-to-face counseling is a common way to educate and counsel people in the health system. This method has been introduced as the most effective method of treating some psychological problems such as depression. Furthermore, while the effectiveness of telephone, face-to-face and book therapy counseling has been evaluated in some studies, in the same way, the acceptance of face-to-face counseling among clients has been mentioned more than other methods. The reason for the acceptance of the direct counseling method was considered to be more effective in controlling stressors.^[16] However, face-to-face counseling is more expensive and time-consuming than other methods. According to some studies, <10% of people seek out face-to-face psychological therapies. The reluctance to be identified and the shame of admitting one's problem in person is one of the barriers to these standard treatments. Some people report not being able to attend medical facilities on time or worrying about access to help when they need help. Office hours, geographical locations, waiting lists, and travel difficulties are structural barriers to accessing face-to-face counseling.^[17] Telephone counseling is a contractual and professional relationship that is established between a trained counselor and a person in need of counseling services, which is done by observing the principles of telephone counseling.^[18] Restrictions on access to psychological therapies can create inequalities in health-care delivery.^[19] Over the past decades, however, advances in technology have played a central role in communicating with others and have created a range of options for supporting and communicating with people out of reach.^[20] The value of telephone counseling seems to be lower than face-to-face counseling, but with this technology, very useful care interventions can be performed in a short period.^[21] In general, communication technology is rapidly changing the field of health care, and the provision of telemedicine health services has attracted the interest of health professionals and clients and patients. Providing telecommunication health services is a broad concept meaning the use of telecommunication and communication technology and computers to provide services to customers and not to limit the provision of services in clinics or offices or other specific places. The use of these technologies in the fields of medicine and treatment, nursing, social work, psychology, nutrition, etc., is being used and expanding. It is agreed that the treatment and management of chronic diseases require the use of remote health-care technology. Telephone counseling is expected to save on anticipated costs, increase patient comfort, and increase self-care. The use of such services causes health services to move from patient-centered to patient-centered and instead of hospital-oriented to community-oriented, and the place of service to patients' homes and their comfort.^[6,22-24]

Therefore, the present study was conducted to determine the effect of face-to-face and remote (telephone) counseling on the desire for adoption in infertile couples. The use of such services causes health services to move from being patient-centered and hospital-oriented to patient-centered and community-oriented. In addition, the place of service should move towards the homes of patients and their comfort.^[6] Therefore, the aim of this study was to determine the effect of face-to-face and remote (telephone) counseling on the desire for adoption in infertile couples.

Materials and Methods

The present study was a two-group intervention study that was performed on 68 infertile couples eligible for inclusion in the study referred to Mashhad Infertility Treatment Center in 2013-2015. To determine the sample size, no similar study was found on the knowledge and attitude of infertile couples; therefore, the Cohen table was used. According to this table, to compare the two groups with 80% power and the effect of one and $\alpha = 0.05$, the sample size of 17 pairs in each group was estimated. Considering the loss rate of 40%, the number of samples in each group was 25 pairs. The duration of each consultation is between 2 and 3 weeks. Sampling was stopped after the number of samples reached the desired level (17 pairs in each group). Thus, 44 couples entered the study, and finally, 34 couples remained in the study. Inclusion criteria were – written consent of the couple to participate in the study, at least 5 years have passed since the diagnosis of infertility, age over 30 years in at least one of the couples, not having a live child, no action to accept the adopted child, no experience of the major stressful event during the past 6 months No psychiatric problems, access to an iPhone. Exclusion criteria were as follows: – the absence of each couple in more than one counseling session, unwillingness to continue participating in the study. The researcher's skill in providing adoption advice to infertile couples was confirmed after studying the relevant scientific sources and passing the necessary training courses under the supervision of mentors and counselors. After obtaining permission from the University Ethics Committee and obtaining permission from the officials of the Milad Infertility Treatment Center in Mashhad, the researcher referred to this center. Sampling was performed from clients referred to the infertility center in two ways. Fourteen pairs of the study sample were obtained by the available method from among the couples who were present in the waiting room of the infertility center. In this way, the researcher, after introducing himself and acquainting the couple with the research, its goals and benefits, invited people who were eligible to enter the study to participate in this study. Couples who consented to participate in the study completed

the informed consent form, personal information, and pretest attitude toward infertility, fertility motivation, awareness, and attitude toward adoption. The forms were completed while the couple was waiting for a visit, and the researcher answered their questions and ambiguities regarding the questionnaires. The researcher also took a phone number from them to coordinate the next sessions and gave them his contact number.

Intervention

After each couple was placed in a counseling group, counseling sessions were coordinated based on when the couple announced and it was appropriate for them. For telephone counseling, the couple used a speakerphone so that they could hear and interact with the counselor during counseling. The time of telephone counseling sessions was at the request of the clients in the evening and at night and on the days when the clients were at home and had no other occupation. During the telephone counseling, the researcher pointed out the possibility of interruption of communication or a problem during the counseling, and asked them to report it if there was a problem with the sound quality so that the counseling could be done in the best possible way. The number of sessions in face-to-face counseling was between two and four (average three) and with the duration of each session between 60 and 90 min. The number of sessions in telephone counseling was between three and six (average four) sessions, and the duration of each session was between 30 and 60 min. In both groups, this number of sessions was held for each couple for 2–3 weeks, and all sessions were conducted in the presence of a couple.

In the face-to-face counseling group, the posttest sheets were handed to them at the last session and the researcher asked them to complete the questionnaires and send them to him/her when contacted. In the telephone counseling group, 2 weeks after the last counseling session, posttest questionnaires were sent to them and the couple returned them after completing the questionnaires. The researcher referred people to medical centers or specialized counseling during the consultation and if necessary.

Ethical considerations

This study was conducted after the approval of a research plan in the ethics committee of Mashhad University of Medical Sciences (ethics code Ir.MUMS.rec. 1394.576). All participants completed a written informed consent to participate in the study. Participants were assured that they could withdraw from the study at any time and that their treatment would not be disrupted.

Statistical analysis

After data collection, the forms were coded and entered into the computer. After ensuring the accuracy of data entry, data analysis was performed by SPSS software

version 16(IBM, SPSS Inc., Chicago, Illinois, USA) and the following statistical methods were used. First, data related to quantitative variables in terms of normal distribution were analyzed by Smirnov–Kolmogorov test. Descriptive tests were used to describe the characteristics of research units in each of the two groups. In all tests, a significance level of 5% and a test power of 80% were considered, so in cases where it was $P < 0.05$, a significant difference was reported.

Results

The age range of women was 24–42 years and the age range of men was 29–60 years. The results of Mann–Whitney and Chi-square tests showed that demographic characteristics such as age, education, income, duration of marriage were not statistically significant in the two groups [Table 1]. Furthermore, based on statistical tests, the duration and cause of infertility and *in vitro* fertilization and intrauterine insemination treatments were homogeneous in the two groups.

To determine the desire of infertile couples to have an adopted child, a ten-point visual ruler was used, and the score of each individual’s desire before and 2 weeks after counseling was measured by this scale. The mean score of the couple’s desire for adoption before the intervention, there was a statistically significant difference between the two groups of face to face counseling and telephone counseling. According to the independent *t*-test, the

mean score of the couple’s desire for adoption was higher in the face-to-face counseling group. The mean score of propensity to adopt after the intervention was significantly higher in the face-to-face counseling group [Table 2]. The mean score of propensity to adopt in the face-to-face counseling group increased significantly 2 weeks after the intervention compared to before the intervention. Furthermore, the mean score of desire for adoption in the telephone counseling group increased significantly 2 weeks after the intervention compared to before ($P < 0.001$).

The propensity to adopt score in the face-to-face counseling group was 3.15 and in the telephone counseling group was 3.23, which was not statistically significant in the two groups [Table 2].

In examining the causes of willingness and unwillingness of the studied couples to adopt, we can refer to the items mentioned in Table 3. The most common reason given by infertile men and women for wanting to adopt was hope for self-healing and having children (women 70.6% and men 67.6%). Furthermore, the most common reason for the desire to adopt an adopted child was the strong need to have a child (23.5% in women and 23.5% in men).

Discussion

Based on the findings of the present study, the average score of the desire to adopt, which was

Table 1: Demographic characteristics of research units

Variables	Group		P
	Face-to-face counseling	Phone counseling	
Age			
Female	32.5±5.4	32.7±5.1	0.948
Man	37.6±8.5	36.7±6.5	0.738
Job			
Female			
Employee	3 (17.6)	3 (17.6)	1.000
Housewife	14 (82.4)	14 (82.4)	
Man			
Employee	4 (23.5)	3 (17.6)	0.757
Manual worker	1 (5.9)	3 (17.6)	
Self-employed	12 (70.6)	11 (64.7)	
Duration of marriage (years)			
5-10	22 (64.7)	22 (64.7)	1.000
>10	12 (35.3)	12 (35.3)	
Cause of infertility			
Feminine causes	12 (35.3)	10 (29.4)	0.382
Male causes	11 (32.4)	7 (20.6)	
Both female and male causes	4 (11.8)	9 (26.5)	
Unknown	7 (20.6)	8 (23.5)	
History of IUI, IVF treatments			
IVF	15 (88.2)	12 (70.6)	0.398
IUI	1 (5.9)	2 (11.8)	

IUI: Intrauterine insemination, IVF: *In vitro* fertilization

Table 2: Mean and standard deviation of adoption desire score in two groups of face-to-face and telephone counseling

Adoption desire score	Group		P, t
	Face-to-face counseling	Phone counseling	
Before the intervention	5.06±2.2	3.62±2.5	0.014, 2.517
After the intervention	8.21±1.5	6.85±2.1	0.004, 2.302
Change in adoption score	3.15±2.1	3.23±1.8	0.885, 0.183
Paired t-test result (t, P)	8.716, <0.0001	10.145, <0.001	

Table 3: Frequency and percentage of causes of desire and reluctance to adopt in infertile men and women

Causes of desire and reluctance to adopt	Frequency (%)		χ ² or Fisher test result (P)
	Female	Man	
Causes of desire			
Fear of notoriety	1 (2.9)	1 (2.9)	1.000
The complexity of the adoption process	4 (11.8)	6 (50.5)	0.459
Cultural unacceptability	3 (8.8)	2 (5.9)	1.000
The dissimilarity of the child to the parents	2 (5.9)	3 (8.8)	1.000
Hope to have children	24 (70.6)	23 (67.6)	0.793
Failure of the infertile couple problem	0 (0.0)	1 (2.9)	1.000
Fear of future	2 (5.9)	2 (5.9)	1.000
Psychological rejection	4 (11.8)	3 (8.8)	1.000
Unaware of the history of the child's parents	10 (29.4)	3 (8.8)	0.062
Causes of reluctance			
High cost of treatment	4 (11.8)	3 (8.8)	1.000
Low success of treatment methods	4 (11.8)	5 (14.7)	1.000
Easier solution	2 (5.9)	7 (20.6)	0.150
Feeling a strong need for a child	8 (23.5)	8 (23.5)	1.000
Other reasons	6 (20.5)	1 (2.9)	0.105

considered a score between 0 and 10, in both groups of face-to-face counseling and telephone counseling changed significantly and the desire for adoption increased in them. In this way, the desire of couples in face-to-face counseling increased by 3015 ± 2.1 points and in the telephone counseling group increased by 3.23 ± 1.1 points. There was no statistically significant difference in the amount of change between the two groups. These results indicate that counseling, both face-to-face and by telephone, by affecting the knowledge and attitude toward adoption in infertile couples, can significantly change their desire to adopt a child. Descriptive studies on the desire for adoption have examined the degree of desire and various reasons for reluctance to adopt. For example, Bokaei *et al.* (2012) stated that the infertility rate of Iranian infertile people is <18%.^[6] Nwobodo and Isah (2009) reported that the infertility rate of infertile women was about 27%.^[22] and Adewunmi *et al.*, reported this tendency at 42.6%.^[23] However, in the study of Ezenwankwo *et al.*, the propensity for adoption among infertile women was reported to be 63%.^[24]

Based on the findings of the study units, before the intervention, there were several reasons for the willingness or unwillingness to adopt in infertile people. The most common reason infertile men and women expressed reluctance to adopt was the hope of having children,

in the sense that they hoped to have a biological child. After that, with significant differences, ignorance of the background of the child's parents and the complexity of the adoption process were mentioned. Other reasons for unwillingness to adopt for infertile couples were: psychological rejection of adoption, cultural inadmissibility of adoption, dissimilarity of the adopted child with the adoptive parents, and fear of the future. These results were consistent with the results of existing studies. Bokaei *et al.* cited the main reason for the reluctance to adopt in their study as the hope of having children themselves and said that cultural barriers and the belief that the infertile couple's problem will not be solved by adoption are other reasons for reluctance to adopt. In contrast, Other studies stated that the most important reason for not wanting to adopt is that infertile women like to have biological children.^[25] Ezenwankwo *et al.*, stated that most people believe that an adopted child will never be like a biological child.^[26] In Oladokun *et al.*'s (2010) study, most participants believed that adoption was not culturally acceptable.^[11] Adewunmi *et al.* cited cultural and family constraints as the main reason for the reluctance to adopt.^[23]

Among the men and women in the present study, the most important reason given for the desire to adopt if medical treatment was unsuccessful was "a strong need for a child." Among the reasons for the desire to adopt from the

point of view of women were: "low success of treatment" and from the point of view of men were: "Simple solution to solve the problem of infertility." Other reasons were: The high cost of treatment, the desire to help children deprived of parenthood.

Previous studies have not addressed the causes of infertility in children. Also, although these studies emphasize the need for educational and counseling interventions to increase the desire of infertile people to adopt, in reviewing the texts conducted by the researcher, no intervention was found in this area. However, some of these barriers to adoption are adjustable through counseling. Through counseling program (both face-to-face and telephone) by removing some obstacles, the adoption of adopted children for infertile couples can be done.

The inability of one of the spouses to conceive may cause a dispute between the couple and usually the families of the parties also encourage this dispute.^[27] Accepting an adopted child by filling a child's vacancy in life, in addition to eliminating tension and differences in the family, warms the family center. Sadness and frustration occur when couples do not get treatment and are actually faced with the fact that they cannot have children. This sadness and unhappiness, if combined with depression, can lead to feelings of helplessness and helplessness in the couple. This is more severe in a person who has a problem not having children. Although the Welfare Organization strives to help these families adapt as much as possible, a better understanding of the problems and feelings of these families indicates the urgent need for careful and compassionate attention to address their problems. It seems that the role of counselors and psychologists in this regard is of special importance. It is suggested that the results of this study be used to provide strategies for family adjustment in relation to the adopted child. It is also suggested that a study be conducted to compare the different methods of counseling for better adjustment of infertile couples with adoption and provide psychological security for their married life and that of these children.

Conclusion

Based on the findings of the present study, the mean score of the desire for adoption, which was considered a score between 0 and 10, in both groups of face-to-face counseling and telephone counseling changed significantly and the tendency to adopt more in them. The results of this study also showed that the most common reason that infertile men and women expressed a reluctance to adopt was the hope of having children, in the sense that they hoped to have a biological child.

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Conflicts of interest

There are no conflicts of interest.

References

1. Zoghi Fayyaz E, Aghamohammadian Sharbaf HR, Alipor A, Aliakbari Dehkordi M. The efficacy of adoption skills training on stress reduction and change of coping styles among couples who are applicants for having an adopted child. *J Fundam Ment Health* 2012;14:210-9.
2. Taebi M, Bahrami R, Bagheri-Lankarani N, Shahriari M. Ethical challenges of embryo donation in embryo donors and recipients. *Iran J Nurs Midwifery Res* 2018;23:36-9.
3. Yassini SM, Taghavi Shavazi M, Taghavi Shavazi N. Factors associated with adoption acceptance rate from the view point of infertile couples. *Iran J Reprod Med* 2012;10:413-8.
4. Maleki-Saghooni N, Amirian M, Sadeghi R, Latifnejad Roudsari R. Effectiveness of infertility counseling on pregnancy rate in infertile patients undergoing assisted reproductive technologies: A systematic review and meta-analysis. *Int J Reprod Biomed* 2017;15:391-402.
5. Ghorbani-Marghmaleki F, Mohebbi-Dehnavi Z, Beigi M. Investigating the relationship between cognitive emotion regulation and the health of pregnant women. *J Edu Health Promot* 2019;8:175.
6. Bokaie M, Farajkhoda T, Enjebaz B, Heidari P, Karimi Zarchi M. Barriers of child adoption in infertile couples: Iranian's views. *Iran J Reprod Med* 2012;10:429-34.
7. Zivaridelavar M, Kazemi A, Kheirabadi GR. The effect of assisted reproduction treatment on mental health in fertile women. *J Edu Health Promot* 2016;5:9.
8. Mazaheri MM. Comparison of mental health in couples with fertility and infertile couples. *ZJRMS* 2012;14:72-5.
9. Abubakar S, Lawan UM, Yasir JN. Knowledge and attitudes toward child adoption and fostering among infertile women in northern Nigeria. *Sahel Med J* 2013;16:19-23.
10. Nekuei N, Kazemi A, Hasanzadeh A. Preconception interventions in infertile couples. *J Edu Health Promot* 2014;3:101.
11. Oladokun A, Arulogun O, Oladokun R, Adenike Bello F, Morhassan-Bello IO, Bamgoye EA, *et al.* Attitude of infertile women to child adoption in Nigeria. *Niger J Physiol Sci* 2010;25:47-9.
12. van Balen F, Verdurmen J, Ketting E. Choices and motivations of infertile couples. *Patient Educ Couns* 1997;31:19-27.
13. Kheirkhah M, Vahedi M, Janani P. The effect of group counseling on coping with infertility infertile women referred to the clinic of Tabriz. *IJOGI* 2014;17:14-7.
14. Shafiabady A. *Counseling Methods and Techniques*. 27th ed. Tehran: Fekre No; 2015.
15. Peterson B, Boivin J, Norré J, Smith C, Thorn P, Wischmann T. An introduction to infertility counseling: A guide for mental health

- and medical professionals. *J Assist Reprod Genet* 2012;29:243-8.
16. Kilfedder C, Power K, Karatzias T, McCafferty A, Niven K, Chouliara Z, *et al.* A randomized trial of face-to-face counselling versus telephone counselling versus bibliotherapy for occupational stress. *Psychol Psychother Theory Res Pract* 2010;83:223-42.
 17. Rodda S, Lubman D. Ready to Change: A scheduled telephone counselling programme for problem gambling. *Australas Psychiatry* 2012;20:338-42.
 18. Brenes GA, Ingram CW, Danhauer SC. Benefits and Challenges of Conducting Psychotherapy by Telephone. *Prof Psychol Res Pr.* 2011;42(6):543-549. doi: 10.1037/a0026135.
 19. Badger TA, Segrin C, Hepworth JT, Pasvogel A, Weihs K, Lopez AM. Telephone-delivered health education and interpersonal counseling improve quality of life for Latinas with breast cancer and their supportive partners. *Psycho Oncol* 2013;22:1035-42.
 20. Park EJ. Telehealth technology in case/disease management. *Lippincotts Case Manag* 2006;11:175-82.
 21. Khakbazan Z, Golyan Tehrani S, Payghambaroost R, Kazemnejad A. Effect of telephone counseling during post-partum period on women's quality of life. *J Hayat* 2010;15:5-12.
 22. Nwobodo EI, Isah YA. Knowledge, attitude and practice of child adoption among infertile female patients in Sokoto north-west Nigeria. *Niger Postgrad Med J* 2011;18:272-5.
 23. Adewunmi AA, Etti EA, Tayo AO, Rabiou KA, Akindele RA, Ottun TA, *et al.* Factors associated with acceptability of child adoption as a management option for infertility among women in a developing country. *Int J Womens Health* 2012;4:365-72.
 24. Fatoye FO, Owolabi AT, Eegunranti BA, Fatoye GK. Unfulfilled desire for pregnancy: Gender and family differences in emotional burden among a Nigerian sample. *J Obstet Gynaecol* 2008;28:408-9.
 25. Omosun AO, Kofoworola O. Knowledge, attitude and practice towards child adoption amongst women attending infertility clinics in Lagos State, Nigeria. *Afr J Prim Health Care Fam Med* 2011;3:1-8.
 26. Ezenwankwo FC, Roberts AA, Balogun MR. Acceptability of child adoption in the management of infertility: A survey of women attending fertility clinics in the tertiary facilities in Lagos. *J Clin Sci* 2014;11:35.
 27. Noroozi M, Gholami M, Mohebbi-Dehnavi Z. The relationship between hope and resilience with promoting maternal attachment to the fetus during pregnancy. *J Edu Health Promot* 2020;9:54 [PMID: 32489989].