

Perceptions of Infertility in Turkish Nursing Students

Türk Hemşirelik Öğrencilerinin İnfertilite Algısı

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ABSTRACT Objective: This study was performed to determine feelings, thoughts and perceptions of the bachelor nursing students, who had a basic information regarding infertility, about infertility and the factors affecting their perceptions. **Material and Methods:** This was a descriptive study using qualitative methods. The data of the study were collected during two phases. A structured questionnaire was used during the first phase; and focus group discussions were used in the second phase. Content analysis was performed to analyze study data. The study was performed in the Nursing Department of Health School in Duzce University which is located in Western Blacksea Region in Turkey. Out of 42 students who were studying in the 3rd year of bachelor program of Nursing Department in Health School, 38 students who were volunteers were selected as the study group. **Results:** In this study aiming to determine infertility perceptions of nursing students in Turkey, it was found that students were giving meanings to conceiving a child such as the purpose/meaning of life and continuation of generation; and expressed that especially female students may experience intensive emotional problems when they learn that they can not have a child. It was observed that students may cope with such a situation by staying unmarried/divorcing, preferring to escape, adopting a child, focusing on the religion or looking for some other activities; and female students have approached to adopting a child more negatively than the male students. The students have stated that their culture had a negative sense for infertility, and their meanings for infertility and their emotional/behavioral responses were directly associated with the culture that they were living in. **Conclusion:** It was recommended to carry out more intensive research for the determination of emotions, thoughts and perceptions of the young people regarding infertility, activities aiming to increase their awareness about this topic (such as research, education, written and visual media, etc) and studies for strengthening positive effects of the culture by altering its negative effects on thoughts and perceptions regarding infertility in our country.

Keywords: Infertility; students, nursing; culture

ÖZET Amaç: Bu çalışma infertilite ile ilgili temel bilgiye sahip lisans hemşirelik öğrencilerinin infertilite hakkındaki duygu, düşünce ve algılarını ve bu algılarını etkileyen faktörleri belirlemek amacıyla yapılmıştır. **Gereç ve Yöntemler:** Bu araştırma kalitatif yöntemlerin kullanıldığı tanımlayıcı bir çalışmadır. Araştırmada veriler iki aşamada toplanmıştır. Birinci aşamada yapılandırılmış soru formu kullanılmış ikinci aşamada ise odak grup görüşmesi yapılmıştır. Araştırma verilerinin analizinde içerik analizi uygulanmıştır. Araştırma Türkiye'nin Batı Karadeniz Bölgesi'nde yer alan Düzce Üniversitesi Sağlık Yüksekokulu Hemşirelik Bölümü'nde yapılmıştır. Sağlık Yüksekokulu Hemşirelik Bölümü Lisans Programı 3. sınıfında okuyan ve "Yardımcı Üreme Teknikleri ve Hemşireliği" dersini alan 42 öğrenciden gönüllü olan 38'i çalışma grubu olarak seçilmiştir. **Bulgular:** Türk hemşirelik öğrencilerinin infertilite algılarını belirlemek üzere yapılan bu çalışmada, öğrencilerin çocuk sahibi olmaya, hayatının amacı/anlamı, neslin devamı gibi anlamlar yükledikleri, çocuk sahibi olamayacaklarını öğrendiklerinde özellikle kız öğrencilerin yoğun duygusal sorunlar yaşayabileceklerini ifade ettikleri bulunmuştur. Öğrencilerin böyle bir durumda evlenmeyerek/boşanarak, kaçmayı tercih ederek, evlat edinerek, dine yönelerek veya başka uğraşlar bularak baş edebilecekleri, kız öğrencilerin erkeklere göre evlat edinmeye olumsuz yaklaştıkları görülmüştür. Öğrenciler ait oldukları kültürün infertiliteye olumsuz baktığını ve infertiliteye verdikleri anlamların, duygusal/davranışsal yanıtların içinde yaşadıkları kültürle doğrudan ilişkili olduğunu ifade etmişlerdir. **Sonuç:** Ülkemizde gençlerin infertilite ile ilgili duygu düşünce ve algılarını belirlemeye yönelik daha kapsamlı araştırmaların, gençlerin bu konudaki farkındalıklarını arttırmak amaçlı etkinliklerin ve kültürün infertiliteye ilişkin düşünce ve algılar üzerine olan olumsuz etkilerini değiştirerek olumlu etkilerini güçlendirmeye yönelik çalışmaların yapılması önerilmiştir.

Infertility is defined as failure to become pregnant among couples of reproductive age that have had unprotected intercourse 3 or 4 times over a year, or the failure to maintain a pregnancy.¹ Infertility rates vary across countries, but worldwide, infertility affects more than 80 million people, with a global infertility rate of 5-30%. It is estimated that there are approximately 1.5 to 2 million infertile couples in Turkey.^{2,3}

Because of the emotional problems infertility can cause in individual and marital relationships, some consider it to be more of a developmental crisis of individual and peer relationships, rather than a medical condition.⁴⁻⁶ If married couples fail to have a child, they must deal with inadequacy, guilt, shame, and social stigma, as well as other negative emotions and the burden of not meeting societal expectations.^{3,7,8} Studies show that infertile couples experience more conflict in marital relations, a decrease in harmony and satisfaction, and more concern about the survival of their marriage than do fertile couples.^{6,9-12} Compared to men, childless women feel more stress and pressure, and have higher rates of anxiety and depression.^{8,10-18} The most important reason for this is the loss of a sense of motherhood due to infertility, and a loss of productivity, self-esteem, and genetic continuity.^{19,20} In some traditional societies, the number of children determines a woman's status in society.²¹ Turkish society is filled with expressions such as "A home without children is like a chimney that doesn't smoke," implying that a child is an inevitable consequence of marriage.²² Often, if a couple cannot have children, the woman is accused and placed under social pressure by family elders, acquaintances, or even strangers; this can lead to marital problems, divorce, or, in some parts of Turkey, the taking of a second wife.²³ Although there is much research on the problems of infertile couples, there are few studies examining views of inexperienced young people on infertility. Studies examined university students' views of infertility. The majority of students expressed the desire to have children in the future, and their thoughts and feelings about having a child seemed to be shaped by culture.²⁴⁻²⁷ In their study on graduate-

level nursing students' opinions about infertility, Tasci and Ozkan found that students' gender, the number of children they want, and their familiarity with infertile couples affected their opinions.²⁸ However, there have been no in-depth studies of factors affecting the perceptions of infertility in nursing students with a basic knowledge of infertility.

This study was conducted to determine the feelings, thoughts, and perceptions of nursing students regarding infertility, and the cultural factors that influence these perceptions. To achieve this overall objective, responses to the following questions were sought: What are students' thoughts and feelings about infertility? What are the factors that affect students' thoughts and feelings about infertility? How do the students perceive their culture's perspective on infertility? How do students evaluate their cultural perspective of infertility? This research is a descriptive study using qualitative methods. Note that the use of more than one method is recommended for thorough investigation, identification, and disclosure of research problems in qualitative methodology, and is important for determining the reliability and validity of the collected data and the descriptions.²⁹ Therefore, we used both structured questionnaires and focus group discussion techniques for data collection.

MATERIAL AND METHODS

SAMPLE

All participants were 3rd year undergraduate students of the Department of Nursing at a university in Turkey, and were enrolled in an "Assisted Reproductive Techniques and Nursing" course. Of 42 students, 38 volunteered to participate in the study. The selection of students from the same course ensured that they all had a similar level of basic information about infertility causes, risk factors, and treatment. There were 31 females (mean age 21±1.2 years) and 7 males (mean age 22±1.4 years). All students were single and childless. All but three were living in different parts of the city center.

DATA COLLECTION

The research data were collected in two phases: structured questionnaires and focus group interviews.

Structured questionnaire: The questionnaire consisted of two parts. The first section comprised 10 questions on the sociodemographic characteristics of the participants; the second section comprised 7 open-ended questions to explore participants' feelings, thoughts, and cultural perspectives about infertility. To ensure the content validity of the questionnaire, four expert opinions were obtained; one expert was from the field of education, one from psychiatric nursing, and two held doctorate titles in the field of birth and women's nursing. The questionnaire was found to meet the purpose of the research. To test reliability, a pilot study was carried out using 10% of the study group (3 students). Students' answers to the questions were examined, and no issues were found that required amendments to be made. Requests for participation were made during the students' classes. After explaining the purpose of the research and obtaining informed consent, questionnaires were distributed.

Focus group discussions: We constructed a semi-structured focus group questionnaire based on the themes extracted following analysis of the structured questionnaire data. This comprised 4 questions regarding students' perspectives on infertility. The ideal number of participants for focus group discussions is considered to be between 6 and 8, but it can be as high as 15, depending on the purpose of the study.²⁹ A total of 14 students (10 females and 4 males) who had completed the structured questionnaire and volunteered for the focus group discussions were invited to participate in this phase. The average age of this subsample was 21 ± 1.7 years. All the students were single and living in the center of Turkey in different provinces; all wanted to have at least two (maximum 3) children.

A suitable room was arranged for discussions, and participants were given badges to facilitate familiarity with each other. Participants were not

comfortable with the use of a video recorder, so an audio recorder was used. The aim of the research, and some basic rules to be followed regarding the process of discussions, were explained to participants. A moderator and two observers carried out the focus group discussions. Each focus group discussion was conducted for 1.5 hours, or until no new concepts emerged. Each student was given the opportunity to take the floor. At the end of the sessions, students stated that they had experienced intense emotions and stress because the discussion had focused on sensitive issues.

ETHICAL CONSIDERATIONS

This study was approved by the university ethical committee (2014/54). Formal permissions were received from the school where the study was carried out. Information was provided to participants about the research objective and content, and written informed consent was obtained before data collection began.

DATA ANALYSIS

Following van Manen's recommendation of the utility of content analysis in analyzing students' experiences, this method was used for data analysis of students' feelings, thoughts, perceptions, and cultural perspectives about infertility.³⁰ To ensure the reliability of the survey, the data analysis phase is described in detail here to minimize subjective assumptions and prejudices, and to provide guidance to those conducting similar studies.²⁹

In the first analysis stage, observation notes and written and oral responses to the questions were transcribed and collated. Responses were then examined to identify those related solely to the research topic, and grouped according to semantic similarity and frequency of merged views. Code names were created to describe the responses. The codes were grouped according to the similarity of meaning, and descriptive themes identified to encompass these codes. The same themes were used for both the questionnaire and the focus group discussion analysis.

To improve the reliability of data analysis, codes and themes were created independently by

the researchers, and then discussed collectively. To ensure the validity of the analysis, an expert and 5 of the participants were interviewed. They were asked whether the codes and themes specified seemed valid. Their opinions shaped the final structure of the themes and codes. All questionnaires were numbered to ensure anonymity and prevent identification of individual students by researchers.

RESULTS

All the students expressed a desire to have children in the future (at least 1, and up to 5, children), and at least 2 students around the age of 18 experienced infertility problems. The themes identified are related to each other, and are presented under two broad headings encompassing thoughts and feelings about infertility and cultural influences. The opinions expressed in the focus group discussions are also included here to provide more in-depth interpretation of the findings.

THOUGHTS AND FEELINGS ABOUT INFERTILITY

Five questions on the structured questionnaire related to thoughts and feelings about infertility, and in the focus group discussions, participants' thoughts on not having children in the future and coping strategies were discussed.

Twenty-seven students responded yes to the question "Have you ever thought about having a child?" Many students thought about the question after taking this course, and five students had thought about it due to health problems, such as polycystic ovary syndrome (PCOS) and menstrual irregularities. Most students responded "Yes" to the question "Have you ever discussed the issue of not being able to have children with your partner?" Some responded "Yes" due to medical problems, and some because of sharing information with them about treatments.

"Five months ago I was diagnosed with polycystic ovary syndrome, then I thought how it would be if I had no children." (Female, aged 21)

The sub-themes of purpose/meaning of life, special feelings, the rules of a family, and expecta-

tions for the future were identified from responses to the question "Does it make sense for you to have a child?" The sub-theme of meaning/aim of life seemed the most important. Nearly half of respondents said that having children would give purpose to their lives. All the female participants said that having a child would give meaning to their lives.

"To have a child in my life ... it is my hope, my dream; my heart warms when I think of this ... but I'm not interested at all in getting married; having children is everything to me..." (Female, 22)

"It [having a child] would give meaning to my life." (Male, 23)

More than half of respondents considered that having children generated positive feelings, including joy, peace, happiness, and beautiful/priceless emotions. Some reported that it was important to be a wife, parent, and to belong to a family, and that bonding with a partner and having children would ensure the continuation of their family line and their safety in the future.

"The only common point that connects you with people you love and prevents you from breaking..." (Female, 22)

"The joy of home, sugar of my tea, salt of my food." (Female, 22)

In the focus group discussions, having a child was seen as the completion of life's purpose, and the need to feel self-completion and fulfill a strong urge to produce something. Participants' cultural upbringing played a part in their responses. While the female students in the group felt that women's reproductive ability is a privilege, the male students felt that this was not important. Male students also stated that having children is an important life goal. However, one male student emphasized that having a child would never be the center of his life, that the only thing that mattered was himself.

"I think the most important thing that distinguishes females from males ... females can create lives. They can give birth. I think that this is a very different, superior feeling" (Female, 21).

"It is actually not so important for me to have children. Because I do not want to take someone to

the center of life, I don't want to live to be connected to someone..." (Male, 23)

Almost all participants gave a deep, emotional response to the question "How would you feel/What would you think if you found out that you could not have children?"

"I would be shocked, my heart would be squeezed, life would stop, I would not have the rest of my life, my world would be destroyed."

"My world was destroyed by myself, I was devastated, I was finished, I could not rally round it, no one could stop me from crying" (Female, 21, wants four children but infertile).

"If I am not able to have kids, I feel like I live for nothing and I would not live" (Female, 22, wants 3 children).

More than half of respondents said that the inability to have a child would make them feel useless and guilty.

"I thought, 'I am useless, and could never be like my mother.'" (Female, 20, infertile)

Some students reported feelings of loneliness, and fear of losing a wife, or relatives, due to being unable to have a child.

"I was afraid of losing my husband, and made him upset." (Female, 22)

In the focus group discussions, when speaking about their likely emotions if they could not have children, all students stated that they would be influenced by the behavior of their spouses. A male student was concerned about a sense of failure to complete the planned steps in life.

"I felt incomplete. I dreamed about my friend holding the hands of children in the parks. I felt bad for that part of me that was incomplete." (Male, 22)

"My wife had this feeling of being unhappy with her life; I think she would divorce me if she identified the source of her unhappiness." (Male, 22)

The answers given to the question "What would you do if you found out that you could not have children?" were grouped under four headings: I would not get married/divorced; I would change my future plans; It is fate/destiny; and I would

run/speak to someone.

Female students tended to respond that they would never have got married, or that they would divorce, although more than half indicated that they would adopt or work at a nursery.

"I thought that in the future I would be strictly separated from the person I was married to. I felt intense pressure on me." (Female, 21)

The most discussed subject in the focus group interviews was adoption. Most females did not wish to adopt, feeling that they could not show an adopted child enough attention, and that they would not experience pregnancy, or feel that the child was a part of them genetically.

"...To look at someone else's child, to extend your sphere of care, you ultimately do not taste that feeling. [The child would] not [be] my breed. Not my genes." (Female, 22)

"Female friends think that they can feel a sense of motherhood when they give birth. But, as a man, I think the same sense can be felt as a father, without giving birth." (Male, 22)

"I think adopting a child is like getting a replacement part for the missing part. I mean, I can adopt a child, but I certainly wouldn't be happy with this. I would consider him or her to be a stranger. I would look at the child through the eyes of a foreigner." (Male, 22)

The majority of students answered that, when faced with this situation, they would prefer to avoid social media perspectives on this issue and focus on the question "What would you do or how would you deal with the situation if you could not have children?"

"Inside myself ... I cannot cope. I cannot describe myself as very bold; I suffered a collapse ... My personality is impaired [here she has difficulty explaining her feelings, her voice trembles, and her eyes fill with tears]." (Female, 22).

"...My response would be escape too ... I seem to be journeying through life in a mess. (laughter, continues) ... next to my wife and children, so they could not say that I would not visit. I am afraid they would feel bad" (Male, 22).

CULTURAL INFLUENCES

Two structured questions related to the cultural dimension of failing to have a child, and in the focus group discussions, cultural influences on the meanings that participants gave to having children were discussed.

Most students (24) expressed negative responses to the question "What is your culture's perspective on having a child?" Nine participants responded positively. Students with negative responses conceptualized the social environment as finding fault, accusing women, and intervening in personal affairs. Students with a positive response stated that the social environment is supportive and comforting.

"[Society expects that] women out there should give birth to a child ... You are not a woman unless you have a child..." (Female, 22)

"If the source of the problem is the woman, a husband takes a second wife or divorces her; if the source of the problem is the man, the wife remains silent." (Female, 26)

Negative responses to the question "How do you evaluate your culture's perspective?" represented the culture as ignorant, cold-blooded, narrow-minded, and incriminating.

"This must be ignorance ... otherwise it is inexplicable. They behave the way people did in the past. This is very much the case for people living in the villages. "Seeing women as defective in any way is ignorance." (Female, 21)

"It is a very wrong idea. In the end, not being able to have children is not a lack, but having kids is an extra blessing..." (Male, 22)

In the focus group discussions, all students concluded that the culture in which they had grown up was the most important factor currently affecting their responses to the idea of an inability to have children. While discussing the perspective of their own culture, students realized that the very thoughts and feelings they were expressing were actually a part of their culture. Students' motivation during the interview increased even further with this awareness.

"I think culture has too much influence on my thoughts and feelings. I notice more now the effect of culture and social pressure. The social environment we grew up in gives us various social responsibilities in our lives. I think because we feel bad about ourselves, we cannot fulfill the tasks society gives us." (Male, 22)

"Our family tradition has a practice of having children once married. If I were infertile, I wouldn't live near my relatives, because I wouldn't be able to deal with them. I would be destroyed. If they talked about my father, they would say, "His big girl is infertile." If my father was told that his elder daughter was unable to have a child, he would be devastated. I would not go on living in Karadeniz if such a thing occurred." (Female, 22)

"Everything that we already have in Anatolia is based on culture. From the moment a child is born, he is under the pressure of culture. Someone is praying into his ear. Once born, everyone tends to make comparisons with elders ... From the very first second, we are exposed to cultural pressures." (Male, 23)

DISCUSSION

In this study, most student participants had thought about the possibility of not being able to have children in the future. Studies with university students in other countries have focused more on the risks of fertility and fertility information.³¹⁻³⁴ and showed that students do not have enough information about fertility/infertility risks. As nursing students, our participants had substantial knowledge about infertility, the risks, and the treatment options. This acquired information may have made them more sensitive to the possibility of encountering infertility in the future. In this study, 5 students expressed concerns about their inability to have children because of medical problems (such as menstrual irregularities or PCOS); this was also the case with students in a Canadian study.²⁷ However, a large majority of students in the present study stated that they started thinking about these issues after their course.

An important finding that emerged in this study was the meaning students gave to having a child. In both the questionnaires and the focus group discussions, both sexes assigned great importance to having children. All students expressed a wish for at least one, but not more than five, future children. Tasci and Ozkan assert that having many children is equivalent to efficiency in Turkish society, and young people who want to have a large number of children see infertility as a more serious problem.²⁸ The fact that all of the students want to have children in the future shows the similarity of the expectations of college students in different countries. In previous studies of university students, females in particular expect to have 2–3 children in the future.^{27,28,33,35}

During the focus group discussions, students described having a child as the meaning or purpose of life, and suggested that parental instincts are strong. They mentioned the importance of cultural upbringing, and considered having a child as necessary to their life goals. The inability to have children affected both sexes, but women were more emotionally affected. Infertility was perceived as the loss of a sense of motherhood, productivity, self-esteem, and genetic continuity.^{19,20} In our study, female (but not male) students insisted that there is a reproductive instinct, and felt that difficulties in coping with infertility can be caused by a fear of life. In many cultures, pregnancy and parenthood are seen as a critical developmental stage, and having children can be considered one of life's most important developmental steps. For women, infertility may mean that they cannot meet society's expectations of motherhood; for men, it can affect a sense of masculinity that is culturally mediated. It is understandable that individuals who experience infertility may feel a sense of incompleteness. Therefore, infertility manifests itself as a sudden and unexpected life crisis, and many couples define it as the biggest crisis in their lives.⁴ The meanings ascribed to infertility by the unmarried participants give important information about how infertility can affect individuals psychosocially in our society.

Recent studies of infertile women show that 50% face additional problems, such as psychosocial suffering, cancer, heart failure, and other life-threatening illnesses.^{11,13,16,36-38} Female participants expressed strong emotions about the experience of infertility, using quite striking expressions: "My life would stop," "My world would be destroyed." These intense feelings, and the cultural influences on the meanings assigned to having children, were important aspects of the data. A study conducted in Iranian, infertile woman have used very similar expressions of Turkish student.⁴⁰ In the focus group discussions, students recognized the huge emotional impact of this subject. In a previous study with a similar sample,²⁷ the authors suggested that not being able to have biological children may cause negative emotional reactions in participants.

Female students particularly mentioned that a sense of lack, or guilt, would follow these emotions. Since society sees childlessness as a violation of social norms, individuals who internalize this sense can experience threats to personal identity. Faced with these threats, feelings of guilt, uselessness, and alienation occur.^{18,40} In addition, when women cannot have children, high levels of stress and anxiety are reported as underlying causes of the loss of self-esteem.^{19,20,41} Echoing the findings of Whitten et al.'s study of male infertility, the male students in this study expressed their feelings as a failure to complete one of the most important developmental stages.²⁷ Marriage and children are seen as the completion of the development process. However, a study conducted with university students in Turkey on male student infertility revealed more negative judgments. The authors suggested that men—more so than women—are forced to express themselves, and that men's emotional reactions are not as apparent.²⁸ In our study, the small sample of males may have led them to express less emotion.

In the focus group discussions, there was a debate between male and female students concerning what they would do if they were diagnosed with infertility. One-third of students said that they would definitely adopt a child. Female students, however, were more negative about this, re-

porting that they would not feel that an adoptive child was part of themselves or that they would not feel like a real mother. Male students were more positive, suggesting that being a father has nothing to do with hormones, and is a condition that can be learned later. Previous studies have highlighted women's concerns of not being able to have biological children, and their fear that not experiencing pregnancy, birth, and breastfeeding might be perceived as a loss of body control, integrity.^{5,42} Kılıç et al.²³ suggested that adopted individuals are seen as a symbol of reproductive failure, and the continuous frustrations of couples that cannot conceive. Gonzalez conducted a qualitative study with infertile women, and found that the role of childlessness was characterized by reactions of loss and grief.⁴³ In Turkish culture, the important psychological values for women are seen as children, the mothering instinct, marriage, and strengthening bonds; for males, the continuation of economic and traditional values are emphasized.²³ With regard to students' expressed strategies to cope with an infertility diagnosis, students stated that they would not talk to anyone about the problem. It seemed that cultural influences played a role here. Individuals in stressful situations look for meaning, perhaps from religion, which can help individuals through depression and difficult experiences.⁴⁴ A study conducted in Turkey, seen in this study infertile women learn to read the Quran in the process of infertility, they more often meet with prayer leader and they believe will be rewarded with heaven.⁴¹ During the focus group discussions, students said that they would prefer to avoid social media; they recognized that this was a negative coping method, but they wanted to protect themselves from negative points of view.

Studies from different countries indicate that for women in traditional cultures, the role of motherhood is a large responsibility. Some women leave their homes, or their husbands go to live with another woman.^{41,45} Economic, social, and psychological factors influence having children in Turkish society, and marriage and adoption are not seen as sufficient substitutes for having children.²² Being unable to have children is not seen as a health issue;

rather, the shame for not having had children is met with explicit or implicit pressure by family, friends, or strangers.²²

Consistent with previous findings, the majority of participants in this study considered cultural pressures to have children as too interfering, exclusionary, and humiliating; female students stated that they found them intimidating. In a Canadian study undergraduate students of ethnic minorities stated that infertility was not welcomed or supported in their culture.²⁷ In the same study, Western students reported that infertility tended to be seen as a sad or unfortunate situation in their culture, and that infertility treatment methods, or adoption, were supported. In our study, participants from different cities expressed similar negative opinions about cultural perspectives on infertility in Turkey.

In the focus group discussions, the most important factor influencing students' responses to infertility was cultural, and students were surprised at the prominence of cultural perspectives in their responses. The social and cultural environment in which individuals develop shapes their feelings and perceptions, and creates expected roles, which, if they cannot be fulfilled, cause feelings of inadequacy.

CONCLUSION

In this study, students considered the possibility of future fertility, and imposed meanings on having a child, such as life purpose, or the continuation of generations. Students discussed the intense emotions that they would experience, and the coping strategies-like adoption, or religion-that they would engage in. Students identified their cultural setting as promoting negative perspectives of infertility, and recognized that their interpretations of infertility, and their emotional and behavioral responses, were directly related to the culture in which they lived.

Based on these findings, we recommend that extensive studies be conducted in our country to determine the thoughts, feelings, and perceptions of

young people about infertility. To raise young people's awareness of this issue, activities such as training, and written and visual media should be employed, and efforts made towards balancing the effects of culture with more positive perceptions of infertility.

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Author Contributions

All authors had substantial contributions to conception and design, data collection/analysis and interpretation of data. All authors have agreed on the final version of the manuscript and meet at least one of the following criteria.

Conflict of Interest

Authors declared no conflict of interest or financial support.

REFERENCES

- Goldman MB, Troisi R, Rexrode KM. Women and Health. 2nd ed. Waltham, MA: Academic Press; 2013. p.1581.
- Sezgin H, Hocaoglu Ç. [Psychiatric aspects of infertility]. Current Approaches in Psychiatry 2014;6(2):165-84.
- Rouchou B. Consequences of infertility in developing countries. Perspect Public Health 2013;133(3):174-9.
- Farzadi L, Mohammadi-Fosseini F, Seyyed-Fatemi N, Alikhah H. Assessment of stressors and coping strategies of infertile women. J Med Sci 2007;7(3):603-8.
- Sexton MB, Byrd MR, O'Donohue WT, Jacobs NN. Web-based treatment for infertility-related psychological distress. Arch Womens Mental Health 2010;13(4):347-58.
- Shu-Hsin L. Effects of using a nursing crisis intervention program on psychosocial responses and coping strategies of infertile women during in vitro fertilization. J Nurs Res 2003;11(3):197-208.
- Remennick L. Childless in the land of imperative motherhood: Stigma and coping among infertile Israeli women. Sex Roles 2000;43(11-12):821-41.
- Yanikkerem E, Kavlak O, Sevil Ü. [Problems infertile couples experience and nursing approaches]. J Anatolia Nurs Health Sci 2008;11(4):112-21.
- Boivin J. A review of psychosocial interventions in infertility. Soc Sci Med 2003;57(12):2325-41.
- Hart VA. Infertility and the role of psychotherapy. Issues Ment Health Nurs 2002;23(1):31-41.
- Herrmann D, Scherg H, Verres R, von Hagens C, Strowitzki T, Wischmann T. Resilience in infertile couples acts as a protective factor against infertility-specific distress and impaired quality of life. J Assist Reprod Genet 2011;28(11):1111-7.
- Onat G, Kizilkaya Beji N. Marital relationship and quality of life among couples with infertility. Sex Disabil 2012;30(1):39-52.
- Bayley TM, Slade P, Lashen H. Relationships between attachment, appraisal, coping and adjustment in men and women experiencing infertility concerns. Hum Reprod 2009;24(11):2827-37.
- Dubey A, Singh S. Role of emotional responses in marital adjustment and satisfaction in couples undergoing infertility treatment. Indian Journal of Positive Psychology 2014;5(2):125-30.
- Peterson BD, Newton CR, Rosen KH, Skaggs GE. Gender differences in how men and women who are referred for IVF cope with infertility stress. Hum Reprod 2006;21(9):2443-9.
- Ramazanzadeh F, Noorbala AA, Abedinia N, Naghizadeh MM. Emotional adjustment in infertile couples: Systematic review article. Iran J Reprod Med 2009;7(3):97-103.
- Takaki J, Hibino Y. Family-related opinions and stressful situations associated with psychological distress in women undergoing infertility treatment. Int J Environ Res Public Health 2014;11(9):9068-81.
- Watkins KJ, Baldo TD. The infertility experience: Biopsychosocial effects and suggestions for counselors. Journal of Counseling & Development 2004;82(4):394-402.
- Akın A, Demirel S. [Social gender concept and its effects on health]. C. Ü. Tıp Fakültesi Dergisi 2003;25(4):73-82.
- Podolska MZ, Bidzan M. Infertility as a psychological problem. Ginekol Pol 2011;82(1):44-9.
- Günay O, Cetinkaya F, Naçar M, Aydın T. Modern and traditional practices of Turkish infertile couples. Eur J Contracept Reprod Health Care 2005;10(2):105-10.
- Saydam BK. [The status of infertile women in Turkish society]. Sağlık ve Toplum 2003; 13(1):30-4.
- Kılıç M, Ejder Apay S, Kızilkaya Beji N. [Infertility and culture]. İ.Ü.F.N Hem. Derg 2011;19(2):109-15.
- Ekelin M, Åkesson C, Ångerud M, Kvist LJ. Swedish high school student's knowledge and attitudes regarding fertility and family building. Reprod Health 2012;9:6.
- Nouri K, Huber D, Walch K, Promberger R, Buerkle B, Ott J, et al. Fertility awareness among medical and non-medical students: a case-control study. Reprod Biol Endocrinol 2014;12:94.
- Peterson BD, Pirritano M, Tucker L, Lampic C. Fertility awareness and parenting attitudes among American male and female undergraduate university students. Hum Reprod 2012;27(5):1375-82.
- Whitten AN, Remes O, Sabarre KA, Khan Z, Phillips KP. Canadian university students' perceptions of future personal infertility. OJOG 2013;3(7).
- Tasci KD, Ozkan S. [University School for Health Sciences students' opinions about infertility]. TAF Prev Med Bull 2007;6(3):187-92.
- Yıldırım A, Şimşek H. [Qualitative research designs]. Sosyal Bilimlerde Nitel Araştırma Yöntemleri. 7. Baskı. Ankara: Seçkin Yayıncılık; 2008. p.70-8.
- Van Manen M. Researching Lived Experience: Human Science for an Action Sensitive Pedagogy. 2nd ed. Walnut Creek: Left Coast Press; 2015. p.220.
- Bunting L, Boivin J. Knowledge about infertility risk factors, fertility myths and illusory benefits of health habits in young people. Hum Reprod 2008;23(8):1858-64.
- Quach S, Librach C. Infertility knowledge and attitudes in urban high school students. Fertil Steril 2008;90(6):2099-106.
- Skoog Svanberg A, Lampic C, Karlström PO, Tydén T. Attitudes toward parenthood and awareness of fertility among postgraduate students in Sweden. Gend Med 2006;3(3):187-95.

34. Tydén T, Svanberg AS, Karlström PO, Lihoff L, Lampic C. Female university students' attitudes to future motherhood and their understanding about fertility. *Eur J Contracept Reprod Health Care* 2006;11(3):181-9.
35. Koropecykj-Cox T, Çopur Z. Attitudes about Childlessness and Infertility Treatments: A Comparison of Turkish and American University Students. *J Comp Fam Stud* 2015;46(3).
36. Kızılkaya Beji N. [Assisted reproductive techniques and nursing care]. *İnfertilite Hemşireliği*. 1. Baskı. İstanbul: Acar Basım ve Cilt San Tic AŞ; 2009. p.72-84.
37. Tarabusi M, Volpe A, Facchinetti F. Psychological group support attenuates distress of waiting in couples scheduled for assisted reproduction. *J Psychosom Obstet Gynaecol* 2004;25(3-4):273-9.
38. Azghdy SBH, Simbar CM, Vedadhir A. The emotional-psychological consequences of infertility among infertile women seeking treatment: Results of a qualitative study. *Iran J Reprod Med* 2014;12(2):131-8.
39. Hasanpoor-Azghdy SB, Simbar M, Vedadhir A. The Social Consequences of Infertility among Iranian Women: A Qualitative Study. *Int J Fertil Steril* 2015;8(4):409-20.
40. Benyamini Y, Gefen-Bardarian Y, Gozlan M, Tabiv G, Shiloh S, Kokia E. Coping specificity: the case of women coping with infertility treatments. *Psychol Health* 2008;23(2):221-41.
41. Karaca A, Unsal G. Psychosocial Problems and Coping Strategies among Turkish Women with Infertility. *Asian Nurs Res (Korean Soc Nurs Sci)* 2015;9(3):243-50.
42. Schmidt L, Christensen U, Holstein BE. The social epidemiology of coping with infertility. *Hum Reprod* 2005;20(4):1044-52.
43. Gonzalez LO. Infertility as a transformational process: a framework for psychotherapeutic support of infertile women. *Issues Ment Health Nurs* 2000;21(6):619-33.
44. Hall J. Spirituality at the beginning of life. *J Clin Nurs* 2006;15(7):804-10.
45. Akyüz A, Sahiner G, Seven M, Bakır B. The Effect of Marital Violence on Infertility Distress among a Sample of Turkish Women. *Int J Fertil Steril* 2014;8(1):67-76.