

Effect of Nursing Students' Perceptions of Gender on Perspective on Infertility

Hemşirelik Öğrencilerinin Toplumsal Cinsiyet Algısının İnfertiliteye Bakış Açısı Üzerine Etkisi

Yeter DURGUN OZAN,^a

Mesude DUMAN^a

^aDepartment of Nursing,
Dicle University Atatürk Health School,
Diyarbakır

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Correspondence:

Yeter DURGUN OZAN
Dicle University Atatürk Health School,
Department of Nursing, Diyarbakır,
TURKEY/TÜRKİYE
yeter_ozan@hotmail.com

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ABSTRACT Objective: The purpose of this study was to determine the effect of nursing students' perceptions of gender on perspective on infertility. **Material and Methods:** A descriptive, cross-sectional design. The sample of this study comprised 304 students. A questionnaire including sociodemographic characteristics and the Perception of Gender Scale were used to collect the data. The study analysis was performed using numbers and percentages; and for Kruskal-Wallis and advanced analyses, the Bonferroni-corrected Mann-Whitney U test were used. **Results:** The gender perceptions of society affect infertility in a statistically significant manner. **Conclusion:** Students that have higher gender perception scores reported a positive opinion about infertility.

Keywords: Gender; infertility; nursing; student

ÖZET Amaç: Hemşirelik öğrencilerinin toplumsal cinsiyet algısının infertiliteye bakış açısı üzerine etkisini belirlemektir. **Gereç ve Yöntemler:** Bu çalışma, tanımlayıcı tipte kesitsel bir çalışmadır. Aratırmanın örneklemini 304 öğrenciden oluşmaktadır. Veri toplamada sosyodemografik özellikleri içeren soru formu ve toplumsal cinsiyet algısı ölçeği kullanılmıştır. Çalışmanın analizinde sayı, yüzde, ortalama Kruskal Wallis ve ileri analizler için Bonferroni düzeltilmeli Mann-Whitney U testi kullanılmıştır. **Bulgular:** Toplumsal cinsiyet algısı istatistiksel olarak anlamlı düzeyde infertiliteye bakış açısını etkilemektedir. **Sonuç:** Toplumsal cinsiyet algı puanı yüksek olan öğrenciler infertilite ile ilgili pozitif görüş bildirmişlerdir.

Anahtar Kelimeler: Toplumsal cinsiyet; infertilite; hemşirelik; öğrenci

Reproduction functions are performed in families for continuity of generations. Family is a cultural, social institution that develops through marriage in human life.^{1,2} The purposes of the family institution are to maintain the continuity of human generation. In Turkish society, a child is an element that has economic, psychological, and social value dimensions. Since ancient times, the role of a woman has always been discussed with child care and fertility.^{1,2} A woman who is unable to give birth has been defined as “deficient”, or “deficit”.^{1,2} Therefore, infertility that affects 10-15% of couples in reproductive age is seen as a destructive health problem causing personal, familial, and social issues.^{3,4} Being unable to give birth leads to a potential crisis.⁵ It is believed that infertility is affected by perception of gender because it causes a biopsychosocial problem.

The concept of “gender” defines females’ and males’ personality traits, roles, and responsibilities which are socially determined. The concept of

gender comprises values, expectations, judgments, and roles about how a society considers, perceives, and thinks about us as a male and a female, and what it expects from us.⁶⁻⁸ Another concept contained within gender is gender roles considering that they are traditionally associated with females and males.^{1,2} Roles attributed to females among traditional roles include domestic responsibilities such as childbearing and raising a child; doing the cleaning, dishwashing, and cooking; and inequalitarian responsibilities such as meeting needs of their husbands and children before themselves, depriving their desires for the happiness of their husbands and children, and being inactive in business life.⁹

Issues regarding reproductive health, especially about infertility, are the area where gender discrimination occurs most frequently because fertility is considered as an important function of adult development.¹⁰ Doctors, nurses, midwives, physiotherapists, dietitians, and social service specialists within the health staff have important responsibilities in reducing and preventing fertility problems. More responsibilities are given especially to nurses, within the health staff, because of their caregiver roles. Nurses should provide a comprehensive health care service during life cycles of people to protect them, improve their health, and prevent them from diseases. It is undoubtedly impossible to expect nurses, who have no knowledge about infertility and consider it as an “end,” “deficit”, or “defect,” to offer the needed consultancy to couples.¹¹ Therefore, determining nurses’ attitudes toward gender roles is highly important. The fact that nurses have egalitarian attitudes toward gender roles will guide people receiving service from nurses to have an egalitarian perspective and strengthen nursing. Hence, it is believed that studies conducted to determine the effect of university nursing students’ perceptions of gender on the perspectives on infertility are important. It may be possible to regulate the content of infertility nursing courses in such a way to raise the consciousness of egalitarian perspective on gender by determining the effect of nursing students’ perceptions of gender on their perspectives on infertility.

This study aimed to determine the effect of nursing students’ perceptions of gender on their perspectives on infertility based on the thought that students’ perceptions of gender and their opinions about infertility might affect their approach and support to people.

MATERIAL AND METHODS

This was a descriptive, cross-sectional study. This study was conducted with nursing students in a university located in the eastern part of Turkey between April and May 2017. The nursing department had 400 students when this study was conducted. The sample calculation done in a group with known population found sample size to be 196 with a confidence interval of 5%. This study was completed with 304 nursing students who voluntarily participated and who were reached during the study period to increase reliability. It is clarified that third and fourth year students participated in the study took a Women’s Health Nursing course.

As the data collection form “*Sociodemographic information*” this form was developed in the light of the literature.^{12,13} It included 10 questions regarding sociodemographic characteristics. In this section, the study addressed questions about age, gender, school year, academic achievement, marital status, income level, employment status, and the place where the students lived. “*Opinion Form about Being Infertile form*” this form was prepared in the light of the literature.^{12,13} It included nine questions that determined opinions of students about being infertile in the future. This section comprised questions including the perspective of Turkish society on infertility, opinions about which way should be followed if an individual was unable to have a child, and view about sperm and oocyte donation. Three specialist nurse teachers assessed the internal validity of the form and gave feedback. Then, a pilot study was conducted with 30 students. After the pilot study, necessary changes were made to the form, giving it a final shape. The researchers did not include data obtained from the pilot study in this study. Participating students responded in the form by giving answers yes, no, and uncertain. “*Perception of*

Gender Scale” The Scale was developed by Altınova and Duyan (2013). It was a unidimensional, 5-point Likert-type measurement tool comprising 25 items. The participants completing the scale responded to each item choosing the most appropriate answer for themselves: strongly agree (5) and strongly disagree (1). The items in the scale, 2, 4, 6, 9, 10, 12, 15, 16, 17, 18, 19, 20, 21, 24, and 25, were negative and reversely calculated.

The possible scores on the scale ranged from 25 to 125; higher scores indicated positive perception of gender. To determine scale reliability, the Cronbach’s alpha value was found to be 0.87.⁹ Written permission was obtained from developers to use the scales in this study. The study found the Cronbach’s alpha level to be 0.91.

Data encoding and statistical analyses were performed in a computer environment using Statistical Package for Social Science software (SPSS, IL, USA). Data analysis was performed using percentages, arithmetic means, and standard deviation (SD); and for Kruskal–Wallis and advanced analyses, the Bonferroni-corrected Mann–Whitney *U* test was used. A *P* value <0.05 was considered statistically significant.

Permission was obtained from the ethics committee of a university hospital in Eastern Turkey (No: 2017/101), the Directorate of vocational School of Health Sciences, and the students.

RESULTS

Table 1 shows sociodemographic characteristics of the participating nursing students. The mean age of the students was 21.47 years. Of them, 31.2% were third-year students, 57.2% were female, 53.9% were born in a province, and 50.3% less income than expenditures. Of the students, 97% were single, 83.2% had a nuclear family structure, 51.6% lived with their families (Table 1).

Students’ perception of gender mean scores by their perspectives on infertility were compared using the Kruskal-Wallis test (Table 2).

This study found that students’ perception of gender who believed that “the main duty of woman is being a mother (giving birth),” “being able to be

a mother is same as giving birth to a child,” “infertility is a defect or deficiency,” “a male can get married (getting a co-wife) if the cause of infertility exists within the female partner,” and “infertility treatment is not acceptable in terms of religion” had effect at a statistically significant level ($P < 0.05$).

The corrected Mann–Whitney *U* test was used to determine which groups were associated with the difference. The advanced analysis performed determined that the difference stemmed from people giving the answer “no” to the opinions: “the main duty of woman is being a mother (giving birth),” “being able to be a mother is same as giving birth to a child,” “infertility is a defect or deficiency,” “a male can get married (getting a co-wife) if the cause of infertility exists within the female partner,” “infertility treatment is not acceptable in terms of religion”. The perception of gender mean scores of groups causing difference were found to be higher compared with the scores of other groups.

On the basis of students’ opinions that “infertility is a disease of female partner,” “I adopt traditional methods (which are about religion or black art),” and “I consider alternatives of sperm or oocyte donation,” “I consider alternative of surrogacy motherhood,” it was determined that perception of gender did not have an effect at a statistically significant level ($P > 0.05$).

When the study results are examined on a class basis, those who replied no to the idea of “the main duty of females is being a mother (giving birth)” in second grade students, of “infertility is a defect or deficiency” in third grade students, and of “a male can get married (getting a co-wife) if the cause of infertility exists within the female partner” in first, second and fourth grade students have a higher social gender perception score. It is determined that the gender perception is statistically significant ($p < 0.05$).

DISCUSSION

Studying the ideas of university students on gender roles indicates that students still have traditional views.^{14,17} Traditional gender roles, which

TABLE 1: Descriptive characteristics of students (n = 304).

		n	%
Gender	Female	174	57.2
	Male	130	42.8
Year	Year 1	57	18.8
	Year 2	84	27.6
	Year 3	95	31.2
	Year 4	68	22.4
Place of birth	Province	164	53.9
	District	89	29.3
	Village	51	16.8
Income level	Less income than expenditure	161	53.0
	Equality between income and expenditure	124	40.3
	More income than expenditure	19	6.2
Marital status	Single	295	97.0
	Married	9	3.0
Family type	Nuclear family	253	83.2
	Extended family	45	14.8
	Fragmented family	6	2.0
Places where they live	With family	157	51.6
	Dormitory	85	28.0
	Other (with relatives, alone)	62	28.5
*Age	21.47 ± 2.24		
*Number of siblings	5.22 ± 2.54		

*Given as an average.

are effective on gender and gender formation, are stated to be influential on creation of social gender perspectives.¹⁸ Infertility and social gender are two interrelated concepts that are affected by the traditional view. Cultural responses about infertility vary among societies. The social pressure generated from being unable to have a child can be understood better when it is assessed in the context of gender roles within the related society. Infertility is known in Turkey as unfruitfulness meaning unproductivity. People suffering from infertility are described as “unfruitful.” In Turkey, a bride should give birth to earn respect in the place where she goes after marriage, win her husband’s favor, discover the pleasure of being a mother, and keep the family name alive. Infertile women are treated with contempt, are overborne, and are denigrated especially in traditional regions. The status of infertile women without children in the family is considered highly poor. They face defamation and derision.

Although it is forbidden according to the law, the husband of a woman being unable to become pregnant may get a new woman in addition to his wife, which is common especially in villages. This situation is named as “getting a co-wife” in colloquial speech. As you can see, the idea of perceiving infertility as a deficiency or failing is dominant in our country.

The problem is explained with familial and ritual deficiencies.^{11,13} This study addressed questions to students about the perspective on infertility in Turkey. The study results showed that students with higher perception of gender scores on opinions regarding society, such as the main duty of a woman is giving birth, infertility is a defect or deficiency, and a male can get married if the cause of infertility exists within the female partner, gave the answer “no.”

The results also showed that perception of gender had an effect on the perspective on infertility. In other words, students with higher scores

TABLE 2: Effect of students' perceptions of gender on their infertility perspectives (n = 304).

Infertility perspectives	Year	Perception of gender mean scores			χ^2	P
		Yes Mean±SD	No Mean±SD	Uncertain Mean±SD		
The main duty of females is being a mother (giving birth)	Year 1	88.0±8.6	95.5±15.6	84.3±11.5	3.2	0.20
	Year 2	69.4±18.2	95.7±14.0	79.3±11.7	23.4	0.00
	Year 3	84.2±15.3	99.1±14.5	84.0±18.9	7.9	0.01
	Year 4	84.5±19.5	96.8±20.1	93.2±14.6	3.8	0.14
	Total	79.7±21.0	97.0±15.9	85.6±15.1	25.2	0.00
Being able to be a mother is same as giving birth to a child	Year 1	95.3±18.6	94.6±15.0	84.5±10.6	1.0	0.59
	Year 2	84.5±20.0	91.8±17.6	93.0±7.3	1.7	0.42
	Year 3	86.5±19.3	95.7±20.1	75.2±13.7	25.5	0.00
	Year 4	87.3±16.9	96.9±21.0	95.6±13.7	4.5	0.10
	Total	86.8±18.7	96.6±17.1	85.4±14.5	17.6	0.00
Infertility is a defect or deficiency	Year 1	87.8±13.1	96.5±15.9	88.6±10.7	3.5	0.16
	Year 2	90.5±16.4	90.7±17.1	82.2±29.4	1.6	0.92
	Year 3	78.2±17.1	98.1±16.4	84.8±13.0	12.0	0.00
	Year 4	93.3±17.1	93.9±20.9	99.6±16.1	3.4	0.84
	Total	87.8±16.8	94.9±17.8	93.4±17.9	6.9	0.03
A male can get married (getting a co-wife) if the cause of infertility exists within the female partner	Year 1	84.2±11.5	98.6±14.9	84.8±9.4	10.3	0.00
	Year 2	70.6±20.1	93.9±13.7	85.8±22.9	8.8	0.01
	Year 3	82.8±28.2	97.6±15.8	92.8±18.0	2.6	0.26
	Year 4	80.8±26.9	95.3±19.2	-	7.9	0.01
	Total	80.4±18.9	96.7±16.2	86.4±19.3	27.3	0.00
Infertility is a disease of female partner	Year 1	98.2±18.7	95.1±15.3	88.3±13.1	1.5	0.46
	Year 2	92.2±18.6	90.5±16.8	80.0±13.3	4.0	0.81
	Year 3	85.3±18.8	96.6±17.0	94.3±21.7	2.9	0.22
	Year 4	80.8±16.9	95.3±19.2	-	1.1	0.39
	Total	88.5±20.4	94.3±17.3	90.1±17.1	2.4	0.29
I administer traditional methods (which are about religion black art)	Year 1	86.0±15.3	96.2±15.3	90.2±7.8	3.2	0.19
	Year 2	82.1±17.1	93.6±16.3	87.7±19.6	6.4	0.04
	Year 3	93.1±16.0	99.0±19.8	95.0±13.7	3.8	0.14
	Year 4	99.3±8.6	91.4±12.8	98.8±12.3	3.5	0.17
	Total	91.5±16.5	94.9±18.6	92.4±16.1	3.7	0.15
I consider alternatives of sperm or oocyte donation	Year 1	96.5±24.4	95.5±14.0	89.0±13.8	1.2	0.52
	Year 2	99.4±18.5	89.2±16.2	89.4±21.9	1.8	0.40
	Year 3	99.0±15.7	95.0±18.9	97.4±12.7	1.7	0.91
	Year 4	97.9±16.8	91.9±20.5	94.2±16.8	3.2	0.19
	Total	98.4±17.3	92.7±17.8	94.1±17.7	2.7	0.25
I consider alternative of surrogacy motherhood	Year 1	87.5±10.6	95.6±14.9	81.7±17.1	3.0	0.21
	Year 2	90.1±17.7	89.0±16.3	91.8±22.9	2.2	0.32
	Year 3	96.7±22.3	95.9±17.3	96.5±15.4	3.0	0.99
	Year 4	94.2±19.8	92.3±21.4	98.6±13.5	1.4	0.47
	Total	93.1±17.8	98.5±16.8	93.9±18.3	1.5	0.47
I believe that infertility treatment is not acceptable in terms of religion	Year 1	85.6±12.6	96.2±15.9	90.6±12.8	2.3	0.31
	Year 2	89.5±17.1	95.7±14.4	81.1±19.7	10.7	0.00
	Year 3	88.3±29.9	97.2±17.0	94.2±13.3	1.0	0.60
	Year 4	92.1±23.8	94.4±21.1	95.4±10.3	1.3	0.93
	Total	89.7±21.0	96.0±17.2	88.5±16.7	10.3	0.00

on perception of gender expressed a positive opinion about infertility. However, this study determined that responses of opinions, which required knowledge on infertility about treatment methods, such as “I consider sperm or oocyte donation alternatives, which may be a solution for infertility problem,” and “I consider alternative of surrogacy motherhood” did not have a statistically significant effect on perception of gender.

Nearly half of the students who consist the sample of the study have not taken the lesson on women health yet. In our department, such lessons are taught in third and fourth grades. When the findings of the study are examined according to class divisions, it is noticed that there is no difference in gender perspectives between the students those who taken the Women Health course and those who do not. Gender and infertility issues are addressed in course regarding women health. However, our study sheds light to the fact that it seems the Women Health course is insufficient to be effective on gender perception and perspectives on infertility.

Nursing students might play a key role in the care of infertile couples in the future. Nurses are expected to have adequate knowledge about the issue and know methods of coping with problems to be beneficial in the field of infertility. The literature review determined that nursing and midwifery students did not have adequate knowledge about determining and defining the causes of infertility, its treatment, ethical dimension, and psychological dimension.^{13,19-21} It is believed that thoughts and opinions of nursing students about infertility are also highly important besides their

adequate knowledge and skills in the field of infertility. Nurses with negative opinions about infertility cannot provide effective care to couples. Students need to be provided with sensitivity about gender equality in addition to basic professional knowledge.

In the light of the findings of this study, higher levels of perception of gender ensure to form positive opinions about infertility. Therefore, to improve the quality of care provided to infertile couples, the concepts of gender and gender inequality should be more discussed, and their importance should be emphasized within the nursing education system. In this study, comparison of students from nursing care and other departments, as well as analysis of factors that can be important in social gender roles are suggested to be subjected to further look.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

All authors contributed equally while this study preparing.

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