

Original Article

Pre-Pregnancy Fear of Childbirth in Turkish Nursing Students: How Does the Obstetrics and Gynecology Nursing Lesson Affect this Fear?

Esra Ruzgar, RN

Clinical Nurse, Afyonkarahisar State Hospital, 03200 Afyonkarahisar, Turkey

Oznur Gurlek Kisacik, PhD

Assistant Professor, Faculty of Health Science, Fundamentals of Nursing Department, Afyonkarahisar Health Science University, Turkey

Correspondence: Oznur Gurlek Kisacik, PhD, Assistant Professor, Faculty of Health Science, Fundamentals of Nursing Department, Afyonkarahisar Health Science University, 03200 Afyonkarahisar, Turkey. E-mail: oznur.kisacik@afsu.edu.tr

Abstract

Background: Fear of childbirth is associated with many negative consequences during delivery and the postpartum period, especially regarding maternal and infant health. It is important to identify the fear of childbirth in nursing students before they become health professionals.

Aim: This study aimed to examine the effect of an obstetrics and gynecology nursing lesson on the pre-pregnancy fear of childbirth (FOC) in nursing students.

Methodology: This descriptive and cross-sectional study was carried out with 332 undergraduate nursing students. The study data was collected using a "Student Information Form", and the the Turkish version of the Childbirth Fear - Prior to Pregnancy Scale (WCF-PPS/MCF-PPS).

Results: The mean total WCF-PPS score of the female students included in the study was 41.63 ± 9.49 and the mean total MCF-PPS total score of the male students was 37.17 ± 8.99 . There was no significant difference between the total WCF-PPS and MCF-PPS scores of students who took or did not take obstetrics and gynecology nursing lesson ($p=0.696$; $p=0.133$, respectively). However, the total WCF-PPS score was significantly higher (44.59 ± 8.47) in female students who had difficulty during the clinical practice phase of obstetrics and gynecology nursing lesson ($p=0.016$).

Conclusions: Turkish nursing students had an above-average fear of childbirth. Negative experiences during the clinical practice could be triggered the fear of childbirth. Considering these results, interventions that provide emotional support and promote collaborative clinical practices should be planned and students should be supported in the clinical environment.

Key Words: Fear of childbirth; nursing students; obstetrics and gynecology nursing.

Introduction

Pregnancy is one of the most important stages in the lives of women. During this process, a woman undergoes both physical and psychological changes and begins to adapt to her coming role as a mother (Korukcu, 2020). Pregnancy is the most important life experience for many women. Labor, the event at the end of this process, is considered primarily a physiological event, but it is also a stressful experience involving the sense of a loss of

control (Antic, Rados & Jokic-Begic, 2019). One of the most important factors that has an effect on how it is experienced is the fear of childbirth (FOC) (Demsar et al. 2018). The FOC can be defined as the avoidance or pathological fear (tokophobia) of labor (O'Connell et al. 2017; Stoll et al. 2014) as well as a negative judgement of labor or anxiety, and fear of it (Demsar et al. 2018). The FOC is quite common in young nulliparous women and one out of four women is

known to have a FOC (Antic, Rados & Jokic-Begic, 2019; Lukasse, Schei & Ryding, 2014). A meta-analysis conducted by O'Connell et al. (2017) showed that the prevalence of FOC ranges between 3.7% and 43%. The FOC also affects the decision-making process related to childbirth (Dencker et al. 2019). It is noteworthy that women in their first pregnancy in particular prefer to undergo C-section rather normal delivery due to the FOC (Lukasse, Schei & Ryding, 2014; Sercekus, Egelioglu & Inci, 2015; Stoll & Hall, 2013; Toohill et al. 2015).

According to 2018 data from the Turkish Ministry of Health, the rate of cesarean section is 52% and this increases each year (Health Statistics, 2018). This high percentage is a result of negative expectations and perceptions, especially about vaginal delivery (Derya, Celik & Apay, 2020). Moreover, FOC is associated with many negative consequences during delivery and the postpartum period, especially regarding maternal and infant health. Studies have shown that FOC negatively affects success in breastfeeding (Tatarlar & Tokat, 2016), that women who have a severe FOC experience more labor pain (Junge et al. 2018), and that there is a positive correlation between FOC and prenatal distress (Kabukcu et al. 2019). Furthermore, the high FOC has been reported to increase cases of prolonged labor requiring interventions as well as cases requiring emergency C-section (Handelzalts et al. 2015).

Attitudes towards childbirth are acquired before pregnancy (Antic, Rados & Jokic-Begic, 2019; Stoll et al. 2019). For this reason, it is important to determine the prevalence of FOC and the factors that may affect it in young nulliparous women. However, some studies also reveal that men also experience fear related to the labor of their spouses or partners (Bergstrom et al. 2013; Hildingsson et al. 2014; Sercekus, Egelioglu & Inci, 2015).

Studies conducted to examine the FOC in both males and females have shown that FOC affects decisions that shape the future, such as whether to have a child in the future, the decision to get married, and the preferred delivery method, and that it also affects individuals' emotional health (Demšar et al. 2018; Dencker et al. 2018; Handelzalts et al. 2015; Hildingsson et al. 2014; Lukasse, Schei & Ryding, 2014; Sercekus, Egelioglu & Inci, 2015).

Nursing students (NSs) are future health professionals. Given the possibility that they will encounter and provide care to women who have a FOC, along with their spouses, NSs should be able to identify this fear and be aware of their own perceptions of labor in order to play an active role in nursing interventions to prevent FOC. Some studies have shown that the student population has a similar FOC as others in society, and that these concerns and a lack of knowledge about labor are associated with a higher FOC and preference for a C-section (Ahmadi et al. 2018; Antic, Rados & Jokic-Begic, 2019). Although there are differences between institutions, NSs usually take a lesson on obstetrics and gynecology nursing in the third year of their education in Turkey.

An obstetrics and gynecology nursing lesson, delivered within the scope of the nursing education curriculum, provides an important opportunity for students to reduce their concerns and negative thoughts related to childbirth, and to develop positive perceptions of childbirth. Some studies have reported that this lesson may affect NSs' perceptions and preferences regarding childbirth in different ways (Kapisiz et al. 2017; Gulec, 2020; Utkualp & Ogur, 2010). However, there is no sufficient information about how this lesson affects NSs' pre-pregnancy FOC. On this basis, the present study was planned to examine the effect of an obstetrics and gynecology nursing lesson on the pre-pregnancy FOC in Turkish NSs.

Methodology

Study Design: This descriptive and cross-sectional study was carried out at the Department of Nursing in the Faculty of Health Sciences of a university in Afyonkarahisar province, which is in the Aegean region of Turkey, between 15 December 2019 and 15 February 2020.

Study Sample: The study sample consisted of 332 undergraduate NSs who agreed to participate in the research and signed the informed consent form. These students were drawn from the 437 students who were receiving in the first, second, third and fourth years of their nursing education at the above-mentioned educational institution in the 2019-2020 academic year. NSs who did not wish to participate in the research and did not fill in the data collection form completely were excluded

from the study. The rate of participation in the study was 75%.

Data Collection: The data were collected using a Student Information Form and the Turkish version of the Childbirth Fear - Prior to Pregnancy Scale (WCF-PPS/MCF-PPS). An appropriate period other than lecture and practice hours was chosen for NSs to answer the questions in the data collection tools. NSs were informed about the research and that their participation was voluntary, and their informed consent was obtained. The NSs who participated in the study were asked to fill the data collection forms anonymously to ensure confidentiality. It took approximately 15-20 minutes for each student to fill in the data collection forms.

Data Collection Tools

Student Information Form: This form was prepared by the researchers by reviewing the literature (Antić, Radoš & Jokić-Begić, 2019; Kapisız et al. 2017; Stoll et al. 2014; Stoll, Edmonds & Hall, 2015) and obtaining expert opinions. It consists of 15 questions regarding the characteristics of NSs and their experiences during the obstetrics and gynecology nursing lesson.

The Turkish version of the Childbirth Fear - Prior to Pregnancy Scale (WCF-PPS/MCF-PPS): The Childbirth Fear-Prior to Pregnancy Scale was developed by Stoll et al.(2016) to evaluate the pre-pregnancy FOC of young women and men. The scale consists of 10 items and has a six-point Likert-type rating system; each item scores from 1 to 6 points. The minimum score obtainable from the scale is 10 and the maximum score is 60. A high scale score indicates a high level of fear (Stoll et al. 2016). The Turkish validity and reliability study of the scale was conducted by Uçar & Taşhan (2018) with 543 female and 557 male university students. The Turkish version of the scale was divided into two parts: The Women's Childbirth Fear - Prior to Pregnancy Scale (WCF-PPS) and the Men's Childbirth Fear - Prior to Pregnancy Scale (MCF-PPS). The phrase "partner" was used for the items in the men's form. In the Turkish validity and reliability study of the scale, the Cronbach's alpha coefficient was reported as 0.89 for the WCF-PPS and 0.84 for the MCF-PPS (Uçar & Taşhan, 2018). In this study, the Cronbach's alpha value was 0.89 for the WCF-PPS and 0.85 for the MCF-PPS.

Ethical Considerations: Written permission was received from the Clinical Research Ethics Committee of the university (2019/232) and the administrators of the Faculty of Health Sciences where the research was conducted. Furthermore, the NSs who participated in the study were informed about the purpose of the research, and their verbal and written informed consent was obtained.

Statistical analysis: The research data were analyzed using the SPSS version 22.0 (Armonk, NY: IBM Corp) package program. In the study, descriptive statistics of continuous variables were presented with mean, standard deviation, and minimum and maximum values; descriptive statistics of categorical variables were presented with frequency and percentage. Skewness and Kurtosis values and the Shapiro-Wilk test were used to evaluate the normal distribution of the data. The independent samples t-test was used for independent two-group comparisons of variables with normal distribution, and the Mann-Whitney U test was used for two-group comparisons of variables that did not show normal distribution. In the tests, the level of alpha was accepted as $p < 0.05$ for statistical significance.

Results

Characteristics of the NSs

The mean age of the NSs who participated in the study was 20.63 ± 1.53 ; 79.8% of ($n=265$) were female and 20.3% ($n=67$) were male. The majority of the NSs (92.2%) stated that they wanted to have children in the future; 85.7% of the female NSs and 84.6% of the male NSs reported their future delivery preference for themselves and their spouses was vaginal delivery.

Of the NSs, 41.3% ($n=137$; third and fourth year NSs) had taken the obstetrics and gynecology nursing lesson whereas 58% ($n=195$; first and second year NSs) had not yet taken the lesson. Of those who took the lesson, 42.3% ($n=58$) reported that they had difficulties in the clinical practice component of the lesson. The difficulties experienced were mostly communication problems with the clinical nurses and not being supported (20.6%), and in witnessing deliveries (20.6%). 88.3% of the NSs who took the obstetrics and gynecology nursing lesson had witnessed delivery (mostly, 45.8%, had witnessed vaginal delivery

with interventions) in clinical practice; the feeling of the NSs during this event was mostly "fear of experiencing pain and aches during their own labor, and fear that it would fail" (28.9%) and "happiness" (28.9%).

The pre-pregnancy FOC (WCF-PPS/MCF-PPS) scores of the NSs

The mean total WCF-PPS score of the female NSs included in the study was 41.63 ± 9.49 and the mean total MCF-PPS total score of the male NSs was 37.17 ± 8.99 . For both female and male NSs, the highest mean score (WCF-PPS= 4.98 ± 1.02 ; MCF-PPS= 4.72 ± 1.03) was obtained from the statements "I am worried that labor pain will be too intense" and "I am worried that harm might come to the baby" (WCF-PPS= 4.75 ± 1.10 ; MCF-PPS= 4.44 ± 1.22) from among the 10 items in the scale (Table 1).

Moreover, the total WCF-PPS and MCF-PPS scores did not differ significantly according to the sociodemographic characteristics of the NSs (educational status of the mother and father, occupation of the mother and father, place of residence, income level) ($p > 0.05$).

When the total WCF-PPS and MCF-PPS scores of the NSs were examined according to whether they had taken the obstetrics and gynecology nursing lesson, no statistically significant difference was found ($p = 0.696$; $p = 0.133$, respectively; Table 2). The total WCF-PPS score was significantly higher (44.59 ± 8.47) in female NSs who stated that they had difficulty during the clinical practice phase of the lesson ($p = 0.016$; Table 2).

When the 10 statements in WCF-PPS and MCF-PPS were examined according to the status of taking the obstetrics and gynecology nursing lesson, the mean WCF-PPS scores of female NSs did not differ significantly ($p > 0.05$); however, the mean scores related to the statements (items 2 and 3) focusing on the "spouse's labor pain and inability to cope with childbirth" in the MCF-PPS was found to be significantly higher for the male NSs who took the lesson ($p < 0.05$).

Table 1 Distribution of nursing students' mean Childbirth Fear - Prior to Pregnancy Scale (WCF-PPS - MCF-PPS) (N= 332)

WCF-PPS Items	Mean \pm SD	MCF-PPS Items	Mean \pm SD
1. I am worried that labour pain will be too intense.	4.98 \pm 1.02	1. I am worried that labour pain will be too intense	4.72 \pm 1.03
2. I feel I will not be able to handle the pain of childbirth	3.79 \pm 1.36	2. I feel my partner will not be able to handle the pain of childbirth	3.19 \pm 1.37
3. I am afraid that I might panic and not know what to do during labour & birth	4.14 \pm 1.31	3. I am afraid that my partner might panic and not know what to do during labour & birth	3.67 \pm 1.33
4. I am fearful of birth	3.96 \pm 1.49	4. I am fearful of birth	2.94 \pm 1.47
5. I am worried that harm might come to the baby	4.75 \pm 1.10	5. I am worried that harm might come to the baby	4.44 \pm 1.22
6. I am afraid that I will be out of control during labour and birth	4.24 \pm 1.23	6. I am afraid that my partner will be out of control during labour and birth	3.94 \pm 1.39
7. I fear complications during labour and birth	4.57 \pm 1.15	7. I fear complications during labour and birth	4.14 \pm 1.28
8. Birth is unpredictable and risky	3.71 \pm 1.54	8. Birth is unpredictable and risky	3.59 \pm 1.61
9. I am afraid of what the labour and birth process will do to my body	3.90 \pm 1.45	9. I am afraid of what the labour and birth process will do to my partner's body	3.64 \pm 1.28
10. I am afraid that my body will never be the same again after birth	3.63 \pm 1.49	10. I am afraid that my partner's body will never be the same again after birth	2.91 \pm 1.60
Total WCF-PPS Score	41.63\pm9.49	Total MCF-PPS Score	37.17\pm8.99

SD: Standart Deviation WCF-PPS: Women Childbirth Fear-Prior to Pregnancy Scale; MCF-PPS: Men Childbirth Fear - Prior to Pregnancy Scale

Table 2 Comparison of nursing students' mean Childbirth Fear - Prior to Pregnancy Scale (WCF-PPS - MCF-PPS) scores according to having obstetrics and gynecology nursing lesson (N= 332)

Characteristic	Total WCF-PPS Score			Characteristic	Total MCF-PPS Score		
	Mean \pm SD	p value*			Mean \pm SD	p value*	
Having obstetrics and gynecology nursing lesson	Yes	41.90 \pm 9.19	0.696	Having obstetrics and gynecology nursing lesson	Yes	39.43 \pm 9.26	0.133
	No	41.44 \pm 9.73			No	35.90 \pm 8.70	
Witnessing the birth	Yes	41.91 \pm 9.27	0.791	Witnessing the Birth	Yes	38.00 \pm 8.61	0.355
	No	41.60 \pm 7.98			No	41.00 \pm 10.0	

WCF-PPS Items	Having obstetrics and gynecology nursing lesson	Mean ± SD	pvalue**	MCF-PPS Items	Having obstetrics and gynecology nursing lesson	Mean ± SD	p value**
Having difficulty in clinical practice of obstetrics and gynecology nursing lesson	Yes	44.59 ± 8.47	0.016	Having difficulty in clinical practice of obstetrics and gynecology nursing lesson	Yes	39.84 ± 17.3	0.250
	No	40.18 ± 9.27				No	
I am worried that labour pain will be too intense.	Yes	4.96 ± 0.88	0.246	I am worried that labour pain will be too intense	Yes	4.96 ± 0.97	0.164
	No	4.99 ± 1.23			No	4.59 ± 1.04	
I feel I will not be able to handle the pain of childbirth	Yes	3.85 ± 1.37	0.504	I feel my partner will not be able to handle the pain of childbirth	Yes	3.83 ± 1.15	0.006
	No	3.73 ± 1.34			No	2.83 ± 1.37	
I am afraid that I might panic and not know what to do during labour & birth	Yes	4.11 ± 1.31	0.847	I am afraid that my partner might panic and not know what to do during labour & birth	Yes	4.09 ± 1.31	0.045
	No	4.15 ± 1.31			No	3.44 ± 1.30	
I am fearful of birth	Yes	4.04 ± 1.49	0.315	I am fearful of birth	Yes	3.26 ± 1.38	0.132
	No	3.88 ± 1.48			No	2.76 ± 1.51	
I am worried that harm might come to the baby.	Yes	4.73 ± 1.13	0.952	I am worried that harm might come to the baby	Yes	4.43 ± 1.34	0.959
	No	4.77 ± 1.08			No	4.44 ± 1.16	

I am afraid that I will be out of control during labour and birth	Yes	4.31 ± 1.17	0.459	I am afraid that my partner will be out of control during labour and birth	Yes	4.00 ± 1.41	0.869
	No	4.18 ± 1.27			No	3.90 ± 1.39	
I fear complications during labour and birth	Yes	4.62 ± 1.13	0.684	I fear complications during labour and birth	Yes	4.30 ± 1.29	0.370
	No	4.55 ± 1.14			No	4.05 ± 1.28	
Birth is unpredictable and risky	Yes	3.87 ± 1.45	0.136	Birth is unpredictable and risky	Yes	4.00 ± 1.56	0.155
	No	3.58 ± 1.59			No	3.37 ± 1.60	
I am afraid of what the labour and birth process will do to my body	Yes	3.86 ± 1.54	0.798	I am afraid of what the labour and birth process will do to my partner's body	Yes	3.61 ± 1.46	0.994
	No	3.94 ± 1.38			No	3.66 ± 1.19	
I am afraid that my body will never be the same again after birth	Yes	3.58 ± 1.46	0.624	I am afraid that my partner's body will never be the same again after birth	Yes	2.96 ± 1.63	0.846
	No	3.66 ± 1.51			No	2.88 ± 1.60	

SD: Standart Deviation WCF-PPS: Women Childbirth Fear-Prior to Pregnancy Scale; MCF-PPS: Men Childbirth Fear - Prior to Pregnancy Scale

p<0.05; *independent samples t-test **Mann-Whitney U test

Discussion

It is important to evaluate NSs' future delivery preferences since these students participate in care and counseling services directly associated with pregnancy and childbirth. In this study, the findings obtained from both female and male NSs related to having a child in the future and preferred delivery methods showed that their perspectives towards vaginal delivery were positive and that they supported this delivery method. Some studies in the international literature evaluating attitudes towards delivery methods have reported that young individuals of the university age mostly prefer vaginal delivery (Knobel et al. 2016; Stoll et al. 2009; Stoll, Edmonds & Hall, 2015).

A study conducted with university students in England showed that both students who had negative impressions of childbirth impressions, and those who did not, had lower rates of preferences for C-section (Thomson et al. 2017). Although there are differences between countries, these findings may be related to health policies and sexual health training programs aimed at encouraging and supporting vaginal delivery. Current concerns and fears regarding labor are factors which affect which delivery method is preferred (Stoll et al. 2009).

A study examining attitudes towards C-section among Latin American young people emphasized that a lack of knowledge about vaginal delivery, and a perception that it was high-risk, was associated with positive attitudes towards surgical delivery techniques (Weeks, Sadler & Stoll, 2020). Gulec (2020) reported that the fear of childbirth and the perception of traumatic birth lead Turkish NSs to cesarean or vaginal delivery with epidural anesthesia. Some studies have reported that students whose information about pregnancy and childbirth was mostly derived from the media had a higher FOC (Palumbo et al. 2012; Stoll et al. 2014; Thomson et al. 2017).

Stoll & Hall (2013) reported in their study that students with a low FOC considered vaginal delivery to be a natural event. For these reasons, it is necessary to increase the awareness of university students about C-section and vaginal delivery and address their concerns and fears. Some studies conducted to examine Turkish nursing and midwifery students perceptions of childbirth revealed that the students considered labor to be a physiological event and that they

had positive thoughts towards vaginal delivery (Amanak & Balkaya, 2013; Kapisiz et al. 2017; Utkualp & Ogur, 2010). These findings are consistent with research reporting that being a student in a Department of Health Sciences is associated with considering vaginal delivery to be the best delivery method (Knobel et al. 2016).

The obstetrics and gynecology nursing lesson shapes the students' perceptions of childbirth. During clinical practice, NSs witness the birth of a living being, perhaps for the first time in their lives, and may, unfortunately, have negative experiences of labor. These can underlie the fear of childbirth in NSs (Kapisiz et al. 2017). As reported in the international literature, students experience intense stress and anxiety during their first encounter with a delivery room and delivery (Brunstad, Giske & Hjalnhult, 2016; Thunes & Sekse, 2015). Negative experiences of childbirth are associated with a higher FOC in students (Thomson et al. 2017).

In this study, some of the NSs who stated that they had witnessed a delivery had a feeling of happiness, whereas some stated that they experienced suffering, pain, and fear that the labor would be unsuccessful. Likewise, some studies conducted with Turkish NSs have reported that students who were present in the delivery room experienced stress, fear, and excitement (Kapisiz et al. 2017; Ozcan et al. 2019; Utkualp & Ogur, 2010).

Moreover, if students have negative experiences during their clinical practice, this may prevent them from becoming adequately educated and from fulfilling the professional roles expected from them. A study conducted with midwifery students in Iran to evaluate the effect of fear on learning emphasized that the fear experienced during the first encounter with a delivery raised the stress levels of students, caused physical and psychological problems, and prevented students from fully assuming their professional roles (Ahmadi et al. 2018). Ensuring that students can witness deliveries performed with evidence-based interventions during their clinical practice, and preparing them by using teaching techniques such as introductory videos about delivery, may prevent the development of negative emotions and FOC.

In this study, the WCF-PPS (41.63 ± 9.49) and MCF-PPS (37.17 ± 8.99) scores of the Turkish NSs showed that they had an above-average FOC. Likewise, the WCF-PPS score was found

to be 40.2 ± 10.1 for female students and the MCF-PPS score was found to be 37.93 ± 8.6 for male students in the Turkish validity and reliability study of the scale, which was conducted with 1100 university students (Uçar & Tashan, 2018). Gulec (2020) reported that the WCF-PPS score of female NSs was 41.70 ± 8.30 . Weeks, Sadler & Stoll (2020) reported that the pre-pregnancy FOC score of young Latin American individuals was 28.8 for women and 28.9 for men. Different studies conducted with young populations have determined that the students had a clinically significant FOC (Antic, Rados & Jokic-Begic, 2019; Demsar et al. 2018; Stoll et al. 2015).

In this study, the pre-pregnancy FOC score of the male NSs was lower than that of the female NSs. Similarly, Knobel et al. (2016) reported that being male may be associated with having a lower FOC. Utkualp & Ogur (2010) stated that male NSs felt more comfortable before the delivery room practice than female NSs. The literature reports that FOC is more common in young nulliparous women (Antić, Radoš & Jokić-Begić, 2019; Demšar et al. 2018; Palumbo et al. 2012). However, the FOC in men negatively affects their ability to support their spouses emotionally and physically (Hildingsson et al. 2014). For this reason, pre-pregnancy FOC should be considered a problem that necessitates diagnosis and intervention in both genders.

The findings of the present study showed that the WCF-PPS and MCF-PPS scores of the Turkish NSs did not differ significantly according to their sociodemographic characteristics. Likewise, other studies have reported that sociodemographic characteristics were not associated with negative perceptions and FOC (Antic, Rados & Jokic-Begic, 2019; Thomson et al. 2017). However, some studies have reported that factors such as being a student in health sciences, ethnicity, delivery method, and source of information about delivery and pregnancy affected students' preferences for either vaginal or C-section delivery and their level of fear related to childbirth (Edmonds, Cwierniewicz & Stoll, 2015; Hauck et al. 2016; Knobel et al. 2016; Stoll et al. 2015; Weeks, Sadler & Stoll, 2020).

In the present study, the mean scores of the NSs from the 10 statements included in WCF-PPS and MCF-PPS showed that the pre-pregnancy FOC in NSs focused mostly on factors such as

birth pain, complications, and irreversible physical injuries. When the results of other studies conducted with university students were examined, the students' FOC was triggered and their delivery method preferences were affected by factors such as fear of pain, avoidance of the physical damage caused by labor, and believing that C-section delivery is safer and healthier for the mother and baby (Antic, Rados & Jokic-Begic, 2019; Kapisiz et al. 2017; Stoll et al. 2009; Stoll, Edmonds & Hall, 2015; Gulec, 2020; Weeks, Sadler & Stoll, 2020). Furthermore, negative information and experiences related to childbirth disseminated through various visual media have been proven to be one of the most important factors that trigger the pre-pregnancy FOC in youngs (Palumbo et al. 2012; Stoll et al. 2014; Thomson et al. 2017).

In this study, the total WCF-PPS score of female NSs who stated that they had difficulty during the clinical practice phase of the lesson was found to be significantly higher. This variable did not make a significant difference in the total MCF-PPS score of male NSs. This may be related to the low number of male NSs in the study. Some studies conducted with Turkish NSs have reported that the clinical practice component of the obstetrics and gynecology nursing lesson triggered FOC in students (Kapisiz et al. 2017; Utkualp & Ogur, 2010). In the present study, it is thought that various negative events and difficulties experienced by the NSs during clinical practice affected the perceptions of female NSs about childbirth negatively and triggered their fears.

This is supported by the findings of the study conducted by Thomson et al. (2017). Such situations may cause students who have insufficient support and a lack of trust in clinical practice to associate their negative feelings with the content of the lesson. It is thus necessary to be aware of the emotional responses of students to labor and to help them develop their coping skills by providing the emotional and social support they need during clinical practice. Different studies have shown that the increase in perceived social support and skills for coping with stress positively affected NSs' resilience and psychological well-being and contributed to the increase in the quality of patient care (Al-Gamal, Alhosain & Alsunaye 2018; Onan, Karaca & Unsal, 2019).

Our findings showed that the mean scores from the items in MCF-PPS focusing on the inability of the male to cope with his partner's birth pain and loss of control were significantly higher in male students who took the obstetrics and gynecology nursing lesson. Hildingsson et al. (2014) reported that concerns about a partner's future pregnancy and labor may be associated with a higher FOC in men. A study investigating the determinants of FOC in students stated that the expectation of pain and anxiety regarding childbirth were important determinants of the FOC (Antic, Rados & Jokic-Begic, 2019). Moreover, the obstetrics and gynecology nursing lesson can shape male students' perceptions of the female gender. A study conducted with Turkish NSs reported that male NSs thought women should be valued more after taking the obstetrics and gynecology nursing lesson and that their thoughts about the future, such as whether to get married and have children, became more prominent (Kapisiz et al. 2017). The male students' thoughts about their future spouses and their concerns about labor that developed after the lesson might have contributed to this result.

Conclusion: The findings of this study revealed that Turkish NSs had an above-average FOC. Negative experiences during the clinical practice component of the obstetrics and gynecology nursing lesson were determined to be a factor that triggered the fear of childbirth, especially for female NSs. Moreover, it was determined that the perception of the female and the concerns about the future that developed in male NSs may constitute a risk for FOC. In line with these results, it is necessary to provide university-age individuals with professional information about pregnancy and the process of birth, and to manage the FOC appropriately in this age group. Creating environments that provide emotional support and promote collaborative clinical practice may be beneficial in ensuring that NSs can overcome their negative experiences and fears related to childbirth.

Acknowledgments: We thank all the nursing students who participated to the study.

This study was conducted under the supervision of Ozgur Gurlek Kisacik and was based on the Master's Thesis of Esra Ruzgar and accepted as a in the Master's Program of Afyonkarahisar Health Science University Institute of Graduate Education, Department of Obstetrics and Gynecology Nursing in Turkey in 2020.

References

- Ahmadi G. Shahriari M. Kohan S. Keyvanarad M. (2018). Fear, an unpleasant experience among undergraduate midwifery students: A qualitative study. *Nurse Education in Practice* 29, 110-115.
- Al-Gamal E. Alhosain A. Alsunaye K. (2018). Stress and coping strategies among Saudi nursing students during clinical education. *Perspective in Psychiatric Care* 54, 198-205.
- Amanak K. Balkaya NA. (2013). Knowledge and thoughts of midwifery students about natural birth. *Gumushane University Journal of Health Sciences*, 2, 169-192.
- Antic ZL. Rados NS. Jokic-Begic N. (2019). Are non-pregnant women afraid of childbirth? prevalence and predictors of fear of childbirth in students. *Journal of Psychosomatic Obstetrics & Gynecology* 40, 226-31.
- Bergstrom M. Rudman A. Waldenstrom U. Kieler H. (2013). Fear of childbirth in expectant fathers, subsequent childbirth experience and impact of antenatal education: subanalysis of results from a randomized controlled trial. *Acta Obstetrica et Gynecologica Scandinavica* 92, 967-973.
- Brunstad A. Giske T. Hjalmlult E. (2016). How midwifery students experience learning conditions in labor wards. *Journal of Nursing Education and Practice* 6, 136-144.
- Demsar K. Svetina M. Verdenik I. Tul N. Blickstein I. Velikonja GV. (2018). Tokophobia (fear of childbirth): prevalence and risk factors. *Journal of Perinatal Medicine* 46, 151-4.
- Dencker A. Nilsson C. Begley C. Jangsten E. Mollberg M. Patel H. et al. (2019). Causes and outcomes in studies of fear of childbirth: A systematic review. *Women and Birth* 32:99-111.
- Derya AY. Celik SA. Apay ES. (2020). Turkish version of the childbirth perception scale: reliability and validity study. *Perspective in Psychiatric Care* 56, 28-36.
- Edmonds JK. Cwierniewicz T. Stoll K. (2015). Childbirth education prior to pregnancy? Survey findings of childbirth preferences and attitudes among young women. *Journal of Perinatal Education* 24(2),93-101.
- Gulec DS. (2020). The effect of birth and parenting preparation course on fear of birth and traumatic birth perception in nursing students. *Higher Education and Science*, 10(3), 423-428.
- Handelzalts JE. Becker G. Ahren M. Lurie S. Raz N. Tamir Z. Sadan O. (2015). Personality, fear of childbirth and birth outcomes in nulliparous women. *Archives of Gynecology and Obstetrics* 291,1055-1062.
- Hauck YL. Stoll KH. Hall WA. Downie J. (2016). Association between childbirth attitudes and fear on birth preferences of a future generation of Australian parents. *Women and Birth*, 29(6), 511-17.

- Hildingsson I. Johansson M. Fenwick J. Haines H. Rubertsson C. (2014). Childbirth fear in expectant fathers: findings from a regional Swedish cohort study. *Midwifery* 30, 242-247.
- Junge C. von Soest T. Weidner K. Seidler A. Eberhard-Gran M. Garthus-Niegel S. (2018). Labor pain in women with and without severe fear of childbirth: a population-based, longitudinal study. *Birth* 45, 469-477.
- Kabukcu C. Sert C. Gunes C. Akyo HH. Tipirdamaz M. (2019). Predictors of prenatal distress and fear of childbirth among nulliparous and parous women. *Nigerian Journal of Clinical Practice* 2, 1635-1643.
- Kapisiz O. Karaca A. Ozkan FS. Savas HG. (2017). Birth perception of nursing students. *Journal of Duzce University Institute of Health Sciences*, 7, 156-160.
- Knobel R. Takemoto MLS. Andreucci CB. Docusse P. McKinley DW. Amaral E. (2016). Factors associated with preference for vaginal birth among undergraduate students from southern Brazil. *Birth* 43, 263-267.
- Korukcu O. (2020). Psycho-adaptive changes and psychological growth after childbirth in primiparous women. *Perspective in Psychiatric Care* 56, 213-21.
- Lukasse M. Schei B. Ryding EL. (2014). Bidens Study Group. Prevalence and associated factors of fear of childbirth in six European countries. *Sexual & Reproductive Health* 5, 99-106.
- O'Connell AM. Leahy-Warren P. Khashan SA. Kenny CL. O'Neill MS. (2017). Worldwide prevalence of tocophobia in pregnant women: systematic review and meta-analysis. *Acta Obstetrica et Gynecologica Scandinavica* 96, 907-920.
- Onan N. Karaca S. Unsal BG. (2019). Evaluation of a stress coping course for psychological resilience among a group of university nursing students. *Perspective in Psychiatric Care* 55, 233-238.
- Ozcan NK. Boyacioglu NE. Guducu N. Serhatlioglu SG. Yildirim E. Koç M. Bingol F. (2019). Turkish Midwifery Students' Fear of Delivery Process. *Journal of Caring Science* 8, 121-127.
- Palumbo CS. Hsu R. Maffin J. Klein MC. (2012). Pre-university students' attitudes and beliefs about childbirth: Implications for reproductive health and maternity care. *Canadian Journal of Midwifery Research and Practice* 11, 27-37.
- Republic of Turkey Ministry of Health. Health Statistics Yearbook 2018. General Directorate of Health Research. Ankara, Turkey: Republic of Turkey Ministry of Health; 2018. <https://dosyasb.saglik.gov.tr/Eklenti/36164,siy2018en2pdf.pdf?0> [accessed 13 May 2020].
- Serçekus P. Egelioglu CN. Inci FH. (2015). Birth preferences by nulliparous women and their partners in Turkey. *Sexual & Reproductive Health* 6, 182-185.
- Stoll K. Edmonds J. Sadler M. Thomson G. McAracouper J. Swift ME. et al. (2019). A cross-country survey of attitudes toward childbirth technologies and interventions among university students. *Woman and Birth* 32, 231-239.
- Stoll K. Edmonds KJ. Hall AW. (2015). Fear of childbirth and preference for cesarean delivery among young American women before childbirth: A survey study. *Birth* 42, 270-276.
- Stoll K. Fairbrother N. Carty E. Jordan N. Miceli C. Vostreil Y. Willihnganz L. (2009). It's all the rage these days: university students' attitudes toward vaginal and cesarean birth. *Birth* 36, 133-140.
- Stoll K. Hall W. Janssen P. Carty E. (2014). Why are young Canadians afraid of birth? a survey study of childbirth fear and birth preferences among Canadian university students. *Midwifery* 30, 220-226.
- Stoll K. Hall WA. (2013). Attitudes and preferences of young women with low and high fear of childbirth. *Qualitative Health Research* 23, 1495-505.
- Stoll K. Hauck Y. Downe S. Edmonds J. Gross MM. Malott A. et al. (2016). Cross-cultural development and psychometric evaluation of a measure to assess fear of childbirth prior to pregnancy. *Sexual & Reproductive Health* 8, 49-54.
- Tatarlar A. Tokat MA. (2016). The effect of birth fear on lactation, infant sucking ability and first breastfeeding results. *TAF Preventive Medicine Bulletin* 15, 83-91.
- Thomson G. Stoll K. Downe S. Hall WA. (2017). Negative impressions of childbirth in a North-West England student population. *Journal of Psychos Obstetrics & Gynecology* 38, 37-44.
- Thunes S. Sekse RJT. (2015). Midwifery students first encounter with the maternity ward. *Nurse Education in Practice* 15, 243-248.
- Toohill J. Creedy KD. Gamble J. Fenwick J. (2015). A cross-sectional study to determine utility of childbirth fear screening in maternity practice - an Australian perspective. *Women and Birth* 28, 310-316.
- Toohill, J., Creedy, K.D., Gamble, J., Fenwick, J. (2015). A cross-sectional study to determine utility of childbirth fear screening in maternity practice - an Austral Persp. *Women and Birth* 28, 310-316.
- Ucar T. Tashan ST. (2018). Turkish version of the pre-pregnancy fear of childbirth scale: a validity and reliability study for women and men. *Acibadem Journal of Health Sciences*, 9, 289-296.
- Utkualp O. Ogur P. (2010). Students' feelings and thoughts about the practice of obstetrics and gynecology and nursing. *Maltepe University Journal of Nursing Science and Art*, 3, 45-54.
- Weeks FH. Sadler M. Stoll K. (2020). Preference for caesarean attitudes toward birth in a Chilean sample of young adults. *Women and Birth* 33, e159-e65.