ÖZGÜN ARAŞTIRMA ORIGINAL RESEARCH

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INVESTIGATION OF KNOWLEDGE, ATTITUDE AND AWARENESS CONCERNED WITH THE NORMAL AND CESAREAN DELIVERY OF FEMALE MEDICAL FACULTY STUDENTS

DÖNEM 4 TIP FAKÜLTESİ ÖĞRENCİLERİNİN NORMAL DOĞUM VE SEZARYEN DOĞUM İLE İLGİLİ BİLGİ TUTUM VE FARKINDALIKLARININ ARAŞTIRILMASI

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Öz

Amaç
Bu çalışmanın amacı, Süleyman Demirel Üniversitesi Tıp Fakültesi 4. sınıfta öğrenim gören kız öğrencilerin vajinal ve sezaryen doğumlarıyla ilgili farkındalık düzeyini belirlemekti.

Gereç ve Yöntem
Normal doğum ve sezaryen doğum ile ilgili bilgilerin bilgi ve farkındalık düzeyini belirlemek için literatür doğrultusunda tarafımızdan bir anket geliştirilmiştir. Anket kişisel bilgi formunu ve normal doğum ve sezaryen doğum ile ilgili bilgi ve tutumları araştıran soruları içermektedir.

Bulgular
Jinekoloji ve doğum stajını tamamlayan 59 öğrenci (Grup 1), yaş ortalaması 22,03 ± 2,84 ve stajı tamamlamayan 23 öğrenci (Grup 2), yaş ortalaması 22,44±1,04 çalışmaya dahil edildi. Grup 1'de gelecekte normal doğum yapmak isteme oranı% 62,3 (n=38) idi (diğer grupta % 72,7). Öğrencilerin düşünceleri en güvenilir doğum şekli açısından değerlendirildiğinde; Grup 1'de bu, "komplikasyonu daha az" (%83,3; n=50) cevabı nedeniyle vajinal doğumdu, grup 2'de ise tüm katılımcılar (%100; n=21) vajinal doğum seçeneğini tercih ettiler (daha sağlıklı olduğunu düşünerek) daha sağlıklı). Her iki grupta da en yüksek korku nedeni doğum sancılarıydı.

Sonuç
Bilgi, tutum ve farkındalık düzeyi genel olarak çok düşük bulunmuştur. Çalışmaya göre, staj sırasında ek eğitim programlarına ihtiyaç duyulduğu anlaşılmaktadır.

Anahtar Kelimeler: Normal doğum, sezaryen doğum, tıp öğrencisi, tutum ve farkındalık

Abstract

Objective
This study aimed to determine the level of knowledge, attitude, and awareness about the vaginal and cesarean deliveries of female students attending 4th grade of Suleyman Demirel University Faculty of Medicine.

Material and Methods
In order to determine the knowledge and awareness level of the information about the normal delivery and

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cesarean delivery, a survey was developed by us in accordance with the literature. The survey includes the personal information form and the questions exploring knowledge and attitudes about the normal delivery and cesarean delivery. Results: 59 students who completed the gynecology and obstetrics internship (Group 1), with a mean age of 22,03 ± 2,84 and 23 students who non-completed the internship (Group 2), with a mean age of 22,44 ± 1,04 were included the study. In group 1, the rate of want to have a normal delivery in the future was 62.3% (n=38) (in the other group was 72.7%). When the students' thoughts were evaluated in terms of the most reliable delivery mode; In the group 1, this was vaginal delivery because of answer “less complicated” (83.3%; n=50), whereas in the group 2, all participants (100%; n=21) preferred vaginal delivery option (with thinking that it is healthier). The highest cause of fear in both groups was delivery pains.

Conclusion
The level of knowledge, attitude, and awareness was found to be very low generally. According to the study, it is understood that there is a need for additional training programs during the internship.

Keywords: Normal delivery, cesarean delivery, medical student, attitude and awareness

Introduction

Normal labor is a physiological process in which the cervix is gradually become thin and dilated by increasing the intensity of painful uterine contractions. As a result of the cervical ripening process, the fetus is born from the uterus through the delivery canal (2nd Stage of Delivery). The duration of pregnancy in humans is 266 days from fertilization or regular menstruation (in women with regular cycles of 28 days), calculated from the first day of the last menstrual period (Naegele formula) 280 days or 40 weeks (1).

Cesarean section is the delivery of a fetus through an abdominal skin incision (Pfannenstiel incision) and a lower segment transverse uterine incision (Kerr incision). Cesarean section and sectio words should not be used together, because they both mean incision. Therefore, the term ”cesarean delivery“ is more meaningful. Uterine incisions in cases of abdominal extrauterine pregnancy, uterine rupture surgery or rupture caused by abortion are not included in the definition of this term (1-3). If there is a dangerous situation for the mother or fetus during labor, if urgent delivery requirement due to a dangerous situation for the mother or fetus during labor, if there are state of emergency in which labor couldn't stimulate with oxytocin induction (such as preeclampsia, bad bishop score), if the cases where normal delivery poses a significant risk such as dystocia, if vaginal delivery is contraindicated (giant cervical myoma or if there is a formation like a giant staghorn stone in bladder) cesarean delivery is needed.

Therefore, it should be known that the cesarean section is not a mode of delivery and it is a surgical operation performed in cases where vaginal delivery poses a risk to the fetus or mother (4). Whereas, nowadays, there has been a significant increase in cesarean rates as the cesarean operation becomes safer thanks to increasing technology and possibilities (5).

The most common reasons for the increase in the frequency of cesarean section are: the women who getting married at an older age, who getting pregnant at an older age, who wanting to have fewer children, as well as the increasing infertility problems, and come into prominence of some concepts such as "risky pregnancy" and "precious baby" (6).

It is not practical to list all the indications for cesarean delivery or to discuss all obstetric approaches leading to any changes in the mentioned indications over the years, in this paper. Indeed, nowadays, although some are personal and subjective, many cesarean indications are generally well established. Nevertheless, there are still performed cesarean delivery by a significant number due to the patient's request, misguided patients by her doctor, fear of malpractice of doctors. On the other hand, some indications for a vaginal delivery are still debated (such as breech delivery, vaginal delivery after cesarean birth, twin delivery).

In this study, it was aimed to evaluate the knowledge, attitude and awareness levels about the deliveries of cesarean and normal as well as ideas about which type of delivery would be preferred in the future, in female grade 4 students with the help of the survey. We also hope that this study will be able to contribute to the planning of some changes in educational content during the gynecology and obstetrics internship and increase the effectiveness of the education.

Material and Methods

Our study was approved by the Clinical Research Ethics Committee of Suleyman Demirel University (19.03.2019/Approval no: 121). A total of 82 female students who were 4th-grade students of Medical Faculty of Suleyman Demirel University were included in the study. Verbal information was given to the students before the survey, from the students who accepted to participate in the study, were taken survey form which was developed in accordance with the literature tittle named "Investigation of knowledge, attitude, and awareness concerned with the normal and cesarean delivery of female medical faculty students". In this context, female 4th-grade internship students were asked a total of 22 questions in different two-part about their fears concerning the labor, their thoughts about the type of delivery they intend to do when they got married, and the levels of knowledge about delivery. The above-mentioned questionnaire was applied to students who completed the gynecology and obstetric internship, group 1 (n = 59) and who did not do an internship yet, group 2 (n = 23). Multiple choices and open-ended questions were used in the survey. The survey was performed the using face to face interview technique. Also, our study was conducted in accordance with the Helsinki Declaration Principles.

Statistical Analysis

Statistical analyses were performed using SPSS 22.0 for Windows (SPSS Inc., Chicago, IL, USA). Descriptive statistics of the groups are given as mean and standard deviation (SD). The Kolmogorov-Smirnov test was used to determine whether the data showed normal distribution before the evaluation. Parametric tests (ANOVA, Chi-Square Correlation analysis) were performed between the groups in which the investigated characteristics were a normal distribution. Statistical significance was taken as $p < 0.05$ (95% confidence interval).

Results

Fifty nine students with a mean age of 22.03 ± 2.84 and 23 students with a mean age of 22.03 ± 1.04 were included in the current study. All the results which are given to the questions asked to the students in the survey questions and found to be statistically significant were presented in table 1. In group 1, the ratio of those who wanted to prefer normal delivery in the future was 62.3% (n=38), whereas the rate was 72.7% (n=16) in group 2. There was no significant difference between the groups (p>0,05). In both groups, the students who thought to prefer normal delivery in the future were the majority. These students stated that

Table 1 Statistically significant questions and p values between groups

Survey questions	Statistically significant answers	Group 1		Group 2		p value
		%	n	%	n	
Where did you get the most information with respect to your vaginal or cesarean delivery knowledge?	Medical education	98,4	60	81	17	0,003
	Television	0	0	9,5	2	0,014
	Immediate neighborhood and relatives	6,6	4	28,6	6	0,007
If there is a bad obstetric history (miscarriage, dead fetus, maternal death, etc.) in the family or in the immediate neighborhood? Does it affect the way of delivery?	Yes	37,5	15	7,7	1	0,043
Do you think “water birth” is a good option?	Yes	16,9	10	70,6	12	0,000
What do you think about the most reliable mode of delivery?	Vaginal delivery	83,3	50	100	21	0,046
Do you think you have enough information about normal or cesarean delivery?	No	27,9	17	71,4	15	0,001

* Statistical significance was taken as $p < 0.05$ (95% confidence interval).

normal delivery is a physiological event and therefore they preferred.

%83,3 (n=50) of the students in group 1, in response to the question "What is the most reliable way of delivery?", gave the answer "normal delivery" due to the idea that the normal delivery has less complication rate. Similarly, the same rate in the other group was 100% (n = 21). (due to the idea that normal delivery is healthier) (Table 1) Statistically significant decrease in "normal birth" response in group 1 was remarkable (p=0,046).

Both groups thought that cesarean delivery was more complex and normal delivery was more physiological. Further, both groups had the opinion that the baby would be more negatively affected during cesarean delivery.

Regardless of the type of birth in both groups, the cause of fear was birth pain, and the students were asked that question: "Do you want to stop pain during normal birth and epidural anesthesia?" in both groups answered yes to a high rate. In group 1 was 71,2% (n=42), in group 2 was 70% (n=14). The difference was not significant (p>0,05).

66.7% (n = 14) of the students in group 2 think that it is not appropriate to perform cesarean delivery without indication. Whereas, this rate in group 1 was 73.8% (n = 45). There was no significant difference between the groups (p>0,05). The rate of those who did not have enough information about normal and cesarean delivery was 71.4% (n = 15) in group 2, while the same rate was 27.9% (n = 17) in group 1. There was a significant difference between the groups (p=0,001). (Table 1). After the internship, knowledge, and awareness on this subject increased significantly.

In both groups, fear of normal and cesarean delivery was high. In this context, the major cause of fear in both groups was delivery pain. There was no significant difference between the groups (p>0,05).

After the internship period, it was determined that the level of knowledge about water delivery increased. While the opinion that water delivery was not appropriate was dominant in group 1, the opinion that it was highly suitable before taking the internship was dominant. There was a considerably significant difference between the groups (Table 1). Generally, both groups were of the opinion that the information about normal and cesarean deliveries was obtained during medical education.

Although there was a small number of bad obstetric histories in both groups, the effect of this on in terms of the view of the student to the method of delivery was statistically significantly high in group 1 (p=0.043). Interestingly, in both groups, the view that "the mode of delivery is effective on the deterioration of body shape" was highly dominant. We also detected that most of the students thought that the body shape would deteriorate more by cesarean section. Also, in both groups, cesarean delivery was thought to have negative effects on fetal health. The level of knowledge about delivery was found to be statistically significant (p = 0.001) between the groups, and it was found to increase in group 1.

Discussion

Improving the quality of education of health professionals who will shape society in the future is an important issue that should also be considered in terms of public health. In this context, improving the quality of education can be achieved by identifying deficiencies in education. This study aimed to measure the level of awareness among female students who completed the gynecology and obstetrics internship and non-completed. Such that, after the internship, it was determined that all students had achieved enough information about the delivery type and its complications.

In one study conducted by Yüksel et al., The factors affecting pain perception in cesarean section and normal delivery by evaluating the visual analog scale (VAS) scores before and after delivery were investigated. The mean VAS values before and after delivery were found to be 7.8 ± 2.2 and 7.2 ± 2.4, respectively (p> 0.05) in the normal delivery group, and there was a negative correlation between the number of follow-ups and the postpartum VAS values. (p = 0.007 and r = -0.37). In the cesarean section group, the mean VAS before and after delivery was 6.4 ± 2.0 and 5.3 ± 2.6, respectively (p = 0.03). Unlike vaginal delivery, there was no correlation between the number of follow-ups and VAS scores (p> 0.05). It has been concluded that providing education and psychological support during pregnancy may decrease the patient's anxiety about delivery and pain and cause less pain during delivery (7). In this context, with the increasing knowledge and education level of the students about the birth, the painful feelings of the patients at birth may be reduced consequence of the effective follow-up of pregnancy, psychological support to the patients.

Aydın et al. Conducted a descriptive study to determine the anxiety levels of women before cesarean

section; A survey including “Spielberger State-Trait Anxiety Inventory” (STAI) and questions about women's sociodemographic information was administered to 100 pregnant women. It was determined that 62% of women had previously planned cesarean section, 30.6% had an emergency cesarean section, 95% had strong support systems, 66% had high anxiety before cesarean section, and cesarean section caused high anxiety (8). Thus, Aydın et al. Similar to the study, the reason for the high anxiety of the students in also our study was birth pain and for this purpose, the desire to reduce pain by a method such as epidural anesthesia in group 1 and group 2 were 71.2% and 70%, respectively. One of the prominent results in our study is that the most common fear, regardless of the type of delivery, is delivery pain.

In our study, both groups thought that it was not appropriate to perform a cesarean section according to the request of the patient. Such that, both groups gave 73.8% and 66.7% negative answers to this question, respectively. And they opposed the cesarean section without medical indication. Similarly, in a report published by the International Federation of Obstetrics and Women's Health Committee in 1999, it was reported that cesarean delivery without medical indication was inappropriate (5). In also our study, it was stated that the most reliable mode of delivery was "vaginal delivery" in 82.3% (n = 50) in group 1 and that the main reason was a less complicated procedure. Whereas, in group 2, 100% (n = 21) of the participants preferred vaginal delivery option and they chose the "healthy" option as the reason for their thoughts.

Similar to our study, Osis et al., in a study they conducted in Brazil, 84.8% of all participants stated that normal delivery was the most reliable mode of delivery (9). In our study, although the most reliable mode of delivery was defined as normal birth in both groups, we observed that this rate diminished in group 1. We think that this may be due to the fear of normal delivery which was emerging existed after the education on the ground of episiotomy images and complications, birth videos, watching live delivery, or theoretical lessons about delivery complications.

In a study comparing normal and cesarean delivery rates; 1502 deliveries were performed in a total of 5 years and 46.3% of them were delivered by vaginal delivery and 53.7% by cesarean section. The main indications for cesarean section were acute fetal distress, cephalopelvic disproportion, primipara breech presentation, optional cesarean section, old and repeat cesarean section, placenta pathologies (placenta previa and placenta decollement) and multiple pregnancies. In order to reduce these increased cesarean rates, it was emphasized that it is important to try vaginal delivery after cesarean (VBAC) and to be more objective and selective when determining cesarean indications. In also this study, it is emphasized that cesarean delivery rate is increasing day by day and indications should be determined well and cesarean delivery should be preferred only in case of indication (10). Such that, the world health organization (WHO) states that the cesarean rate should be limited to 15% in a society (11,12). In order to prevent this increase in cesarean rates, intensive efforts are being made in order to have VBAC (6). Kerr incision (lower segment transverse incision) is the most commonly used method in the cesarean section and the risk of rupture at vaginal delivery is as low as 1-2% in these pregnant women. In addition, neonatal respiratory distress syndrome (NRDS) and transient tachypnea of the newborn have been reported more frequently in infants born by cesarean section (13). When the results of our study were evaluated, similar to the above mentioned studies, we think that the level of awareness about VBAC increased after the gynecology and obstetrics internship. Also, among the participants, the most reliable mode of delivery was found to be normal delivery. In this context, VBAC delivery is also a vaginal birth as well and is reliable for inappropriate indications. In this respect, it will be very important that doctor candidates are informed during medical school education. Therefore, this education might be useful for the female trainee doctors who participated in the study to recommend normal vaginal delivery to their patients in their future medical life, or in terms of preferring a normal delivery for themself when they get married.

As a result, we think that the increasing the knowledge of health workers (not only for physician candidates receiving medical education but also all health workers) by organizing practical, theoretical and visual training seminars and in-service training will increase awareness on vaginal delivery, as well as contribute to the reduction of cesarean rates.

Conclusion

To sum up, according to our findings, the level of knowledge, attitude and awareness about normal and cesarean delivery among medical students increased before and after taking an internship. In general, students' knowledge and attitudes after the internship improved positively. Furthermore, the advantages and disadvantages of the two delivery methods are discussed with the help of scientific data and this increases the awareness of the students at the scientif-

ic level during the internship.

For these reasons, clarifying and updating the content of lectures related to normal and cesarean delivery in gynecology and obstetrics internship, increasing the frequency of watching visual content or actual delivery videos, providing internship opportunities in the centers where the number of birth are high, etc. may be useful. Thanks to such training programs, we believe that effective awareness-raising for prospective female physician candidates will be a positive and big step for all the pregnant candidates who have applied to a doctor throughout the country.

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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, shareholding and similar situations in any firm.

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