

## Original Article

# Investigating University Students' Preferences for Mode of Delivery

**Ayse Mete**

Research Assistant, Tokat Gaziosmanpasa University, Faculty of Health Sciences, Department of Midwifery, Turkey

**Ozgur Alparslan, PhD**

Associate Professor, Tokat Gaziosmanpasa University, Faculty of Health Sciences, Department of Midwifery, Turkey

**Correspondence:** Ayse Mete Research Assistant, Tokat Gaziosmanpasa University, Faculty of Health Sciences, Department of Midwifery, Tokat, Turkey E-mail: ayse.mete@gop.edu.tr

### Abstract

**Objective:** This study aimed to examine the birth type preferences of university students from different departments.

**Method:** The universe of the study, which was designed in descriptive and cross-sectional type, consisted of female students staying in a dormitory in Tokat city (n=215). No selection procedure was employed; instead, students who accepted to participate in the survey were included in the study (n=188). The data were collected using a questionnaire form developed by the researchers to identify some socio-demographic characteristics of the students and their thoughts related to their delivery mode preferences. The data analyses were performed using IBM-SPSS 20 software package.

**Findings:** It was found that more than half of the students who participated in the study were born on a normal delivery and that they mostly heard about normal delivery type in their circles. The majority of the students stated that women who had a normal delivery did not experience any problems (50.0%), however, that those who had cesarean delivery had problems (28.7%). It was determined that more than half of the students would choose normal delivery when they gave birth (85.1%) and that the reason for this preference was that they thought the vaginal delivery was healthy for the mother and infant (62.2%). It was found in the study that 67.0% of the students thought have 1 or 2 children, 59.6% wanted the delivery to be performed by a physician, and that 49.5% were afraid of giving birth. When the students' preferences for delivery mode is compared to the birth type they were born on and the most common type of birth they heard about in their circles, a statistically significant relationship was found. Accordingly, it was determined that normal birth was significantly preferred both by students who were born on a normal delivery ( $p = 0.000$ ;  $p < 0.05$ ) and who frequently heard about the normal mode of delivery in their circles. ( $p = 0.002$ ;  $p < 0.05$ ).

**Conclusion:** It was found that the majority of the students studying in different departments at the university were born on a normal delivery and that the birth type preferences of these students would be a normal delivery in the future. Additionally, the delivery mode preferences of the students who often heard about normal deliveries in their circles would also be a normal delivery in the future.

**Keywords:** Birth type, normal birth, cesarean birth, midwifery.

### Introduction

Although pregnancy and childbirth are physiological occasions, they usually create great stress in women. While the mother-to-be feels the excitement and fear of the unknown delivery moment, she is at the same time proud of giving birth to a living thing. Especially in the first gestation, while the woman is experiencing many

new emotions together that she cannot identify, she cannot predict the events she may encounter at the time of birth (Sayiner and Ozerdogan, 2009). These social, psychological, and environmental factors can affect the preference of mother candidate for the mode of delivery (Akyol, Gonen-Yagci and Tekirdag, 2011). During the process of pregnancy, the mother and

the fetus should be evaluated together and the mode of delivery should be chosen accordingly. In this process, the support and education that will be provided to the women can help them make healthier birth type preferences (Karabulutlu, 2012).

In recent years, a divergence from normal delivery has been observed in our country. According to Turkey Demographic Health Survey (TDHS) 1993, 1998, 2003, 2008 and 2013 data, there is a considerable increase in cesarean delivery rates. The cesarean birth rate, which was 6.9% in 1993, increased more than two fold after 5 years. In the following years, this rate was 21.2% in 2003, 36.7% in 2008 and 48.1% in 2013 (TDHS main report, 2013). Our country ranked first in cesarean birth rates among OECD countries in 2015. This criterion, which shows the number of cesarean births per live birth, was reported to be 531 per 1,000 live births for Turkey (OECD, 2017). According to year 2016 international cesarean delivery rates of Health Statistics Yearbook, our country ranks first with 53% which is followed by Romania with 46%, Bulgaria and Korea with 40%, and Hungary with 37%. Holland, Israel, Norway and Finland rank the last with 16% (Health Statistics Yearbook, 2016).

The main reasons for the increase in cesarean rates are increased cesarean indications due to the development of prenatal diagnostic methods; the idea that cesarean delivery will be safer; the prevention of birth-related pelvic relaxation; determination of the timing and the duration of birth by the physician; the pressure of a normal birth responsibility on the physician; the attraction of the financial return of a cesarean birth on the physician; and the request of the woman based on the delivery pain and the orientation (Arslan, Karahan, and Cam, 2008). In terms of the midwifery profession, the request of the pregnant woman is an important issue to be addressed. It is thought that normal delivery decisions will increase by training the pregnant woman with quality prenatal follow-up at the first step and by spreading prenatal preparatory classes.

As is the case all over the world, growing cesarean birth rates and normal birth promotion policies in our country in recent years caused uncertainty in women about their perceptions of the mode of delivery. This study aimed to investigate the birth type preferences of

university students studying in different departments.

## Material and Method

The universe of this descriptive and cross-sectional study (01.01.2018-01.02.2018) consisted of 215 female students who stayed in a dormitory in Tokat. 188 students, who accepted to participate in the study, were involved in the study; therefore a selection procedure was not employed. Verbal permission of the related institution was obtained.

A questionnaire form that was developed in the light of the related literature matching the purpose of the study was used as a data collection tool in the study. The form was made up of 20 questions designed to determine some socio-demographic characteristics of the students and their thoughts about birth preferences. At the outset, the students were informed about the content and objective of the study by the researchers. The questionnaires were distributed to the students who agreed to participate in the study and they were filled in by the students themselves under the supervision of the researchers.

IBM-SPSS 20 software was used to analyze the data. Frequency distribution and Chi-square test were used for the analysis. Statistical significance value was accepted as  $p < 0.05$ .

## Results

The average age of the students participating in the study was  $20.6 \pm 1.3$  (min-max = 17-25). The students were from 27 different departments including 13.3% from theology ( $n = 25$ ), 11.7% from business administration ( $n = 22$ ) and 10.6% from Turkish teaching department ( $n = 20$ ). 13.3% of the students came from a health related department, whereas the rest 86.7% were found to study different fields. Of the students, 51.3% ( $n = 96$ ) lived in a city center and 59.0% ( $n = 111$ ) had equal income and expenditure status (Table 1). It was found that 86.7% of the students ( $n = 163$ ) were born on normal birth and that the most frequent type of birth that 67.0% of the students ( $n = 126$ ) heard about in their circles was vaginal delivery. Half of the students ( $n = 94$ ) stated that women who had a normal delivery in their environment did not have any problems ( $n = 94$ ), whereas 28.7% ( $n = 54$ ) reported that women having cesarean delivery experienced some problems (Table 1).

**Table 1. Distribution of students according to their descriptive characteristics and opinions about delivery type**

Characteristics	n	%
<b>Income status</b>		
Income less than expenses	49	26.1
Equal income and expenses	111	59.0
Income greater than expenses	28	14.9
<b>Department</b>		
Health Sciences	25	13.3
Midwifery	14	7.4
Nursing	10	5.4
Dentistry	1	0.5
Non-health departments	163	86.7
<b>The longest settlement place</b>		
Province	96	51.1
County	59	31.4
Town / Village	33	17.6
<b>Type of delivery that were born on</b>		
Normal delivery	163	86.7
Cesarean delivery	25	13.3
<b>The most frequent delivery type around</b>		
Normal delivery	126	67.0
Cesarean delivery	62	33.0
<b>Problems in women around having normal delivery</b>		
Yes	18	9.6
Partly	49	26.1
No	94	50.0
No idea	27	14.3
<b>Problems in women around having cesarean delivery</b>		
Yes	54	28.7
Partly	51	27.1
No	50	26.6
No idea	33	17.6
<b>Future birth delivery preference</b>		
Normal delivery	160	85.1
Cesarean delivery	23	12.2
Water delivery	5	2.7
<b>The number of children planned for the future</b>		
0	1	0.5
1-2	126	67.0
3-4	45	23.9
5 or over	8	4.3

No idea	8	4.3
<b>Choosing the healthcare personal for the administration of the birth</b>	73	38.8
Midwife	112	59.6
Doctor	3	1.6
No idea		
<b>Fear of birth</b>	93	49.5
Yes	62	33.0
Partly	26	13.8
No	7	3.7
No idea		
<b>The most frequently recommended birth type on social media recently</b>	137	72.9
Normal delivery	33	17.6
Cesarean delivery	18	9.5
Water delivery		
<b>Healthy birth type in terms of the mother and the baby</b>	170	90.4
Normal delivery	12	6.4
Cesarean delivery	6	3.2
Water delivery		
<b>The most worrying side of delivery</b>	60	31.9
Pain	9	4.8
Bleeding	17	9.0
Tears	52	27.7
Problem with the baby	50	26.6
All of the above		
<b>Total</b>	<b>188</b>	<b>100</b>

**Table 2. Distribution of future birth type preferences and descriptive characteristics of the students**

Characteristics	Future delivery type preference			Total (n=188)	Test value X <sup>2</sup> ; p
	Normal delivery (n=160)	Cesarean delivery (n=23)	Water delivery (n=5)		
<b>Income status</b>					
Income less than expenses	41	7	1	49	0.673; 0.955
Equal income and expenses	96	12	3	111	
Income greater than expense	23	4	1	28	
<b>Department</b>					
Health related fields	23	2	0	25	1.350; 0.509
Non-health fields	137	21	5	163	
<b>Family type</b>					
Core family	122	18	4	144	0.079; 0.961
Extended family	38	5	1	44	
<b>The longest settlement place</b>					
Province	78	14	4	96	3.854; 0.426
District	51	7	1	59	
Town / Village	31	2	0	33	
<b>The type of delivery that were born on</b>					
Normal delivery	145	14	4	163	<b>15.643; 0.000</b>
Cesarean delivery	15	9	1	25	
<b>The most frequent delivery type in the circles</b>					
Normal delivery	115	8	3	126	<b>12.632; 0.002</b>
Cesarean delivery	45	15	2	62	
<b>The number of future children</b>					
0	1	0	0	1	15.448;0.051
1-2	106	17	3	126	
3-4	41	2	2	45	
5 or above	4	4	0	8	
No idea	8	0	0	8	
<b>Fear of birth</b>					
Yes	75	15	3	93	4.191;0.651
Partly	56	5	1	62	
No	22	3	1	26	
No idea	7	0	0	7	
<b>Choosing the healthcare personal for the administration of the birth</b>					
Midwife	67	5	1	73	5.089;0.278
Doctor	90	18	4	112	
No idea	3	0	0	3	
<b>Total</b>	<b>160 (85.1%)</b>	<b>23 (12.2)</b>	<b>5 (2.7)</b>	<b>188(100.0)</b>	

When the students participating in the study were asked about their future delivery type preference, it was determined that 85.1% (n = 160) preferred normal birth, 12.2% (n = 23) cesarean birth, and 2.7% (n = 5) preferred water birth (Table 1). When students who preferred a normal birth (85.1%) were asked about the reasons for their preference, 62.2% (n=117) stated they found it healthier for the mother and the infant, 16.0% (n=30) said they heard about the satisfaction of people in their close environment from this delivery type, and 2.1% (n=4) reported they thought there would be less pain in this mode of delivery. Of the students who stated they would

prefer the cesarean delivery (12.2%), 9.6% (n=18) said they thought they would have less pain, 1.6% (n=3) reported they heard about the satisfaction of women from this birth type, and 1.1% (n=2) stated they preferred it because it would be healthier for the mother and the infant.

It was determined that 67.0% (n = 126) of the students thought have 1 or 2 children, 59.6% (n = 112) wanted a physician in their delivery, and 49.5% (n = 93) were afraid of giving birth. 72.9% (n = 137) of the students stated that they had recently observed that vaginal delivery was frequently recommended on social media, the

Internet, and in social environments, and 90.4% (n = 170) stated they heard that normal birth was better for the mother and baby health than other birth types. When asked about what they were most worried at birth, the students mentioned pain (31.9%; n = 60), problems with the baby (27.7%; n = 52), vaginal tears (9.0%; n = 17), bleeding (4.8%; n = 9), while 26.6% reported that all of these problems could be seen (Table 1).

When such variables as the status of studying in a health-related department, income and expense status, family type, the longest settlement place, the number of children planned to have, fear of birth, choosing the healthcare personnel for the delivery, and students' future delivery preferences were compared, no statistically significant relationship was found between them ( $X^2=1.350$ ,  $p=0.509$ ;  $X^2=0.673$ ,  $p=0.955$ ;  $X^2=0.079$ ,  $p=0.961$ ;  $X^2=3.854$ ,  $p=0.426$ ;  $X^2=15.448$ ,  $p=0.051$ ;  $X^2=4.191$ ,  $p=0.651$ ;  $X^2=5.089$ ,  $p=0.278$ , respectively) ( $p>0.05$ ) (Table 2).

## Discussion

The increase in cesarean rates in the world and in our country in recent years is striking. Cesarean applications except for medical necessity pose risks for the mother and newborn health. Despite these increasing rates, our study was conducted to examine the birth type preferences of mother-to-be university students.

In our study, it was determined that more than half of the students were born on a normal delivery. This can be explained by the fact that given the mean age of the students participating in the study, the cesarean birth rates of 20 years ago were not as high as it is today. In our study, when the future birth type preferences of the mother-to-be students were asked, it was determined that the majority of the students preferred a normal birth (85.1%). In similar studies conducted with university students, it was reported that most of the students preferred vaginal birth (Doganer et al., 2013; Kaymak, 2017; Knobel et al, 2016; Stoll et al., 2009). In a study conducted on this topic, it was reported that 60.3% of the students studying health sciences preferred the normal birth due to its naturalness, 83.8% of them were against optional cesarean delivery unless there was a medical indication, and 99.5% thought that cesarean birth had high costs (Doganer et al., 2013). In our study, there was no statistically significant

relationship between students' education in health-related departments and birth preferences (Table 2). This was believed to have stemmed from the fact that the rate of students studying in health-related departments among the participants was low.

In another study conducted on students studying health sciences, when the distribution of the findings regarding the reasons for the vaginal birth preferences of the students was examined, 92.4% of the students thought it was healthy, 84.6% stated it accelerated the harmony between the mother and the baby, 76.5% of them said it provided early recovery, 66.5% said it helped early adaptation back to the social life (Kaymak, 2017). When the participants in our study were asked about the reasons for their preferences, it was determined that 62.2% of the students thought it was healthier in terms of the mother and the baby, 16.0% stated the people in their circles who had normal delivery were satisfied with this birth type, and that 2.1% thought it would be less painful. Of the participants who preferred a cesarean delivery (12.2%), 9.6% thought it would be less painful, 1.6% stated the women in their environment who had a cesarean delivery had a satisfaction from this birth type, and 1.1% said they preferred it because they thought it was healthier for the baby and the mother. The majority of the multiparous women in Erzurum city were reported to prefer vaginal birth (78.8%). They thought the normal delivery was healthier (54.3%) and it usually occurred spontaneously (18%) in the hospital.

In our study, preference for normal delivery by the majority of university students suggests a relation between the education level and the mode of delivery. While some studies indicate that as the educational level of women giving birth increased, the rates of cesarean delivery increased as well (Elkin, 2016; Karabulutlu, 2013), others report that there is no relationship between the educational level of women and their preferences for delivery types (Bektas, 2008; Ergol and Kurtuncu, 2014). In a study conducted on healthcare personnel and non-healthcare personnel, it was reported that the cesarean delivery was statistically higher in the healthcare personnel group with higher education level compared to the non-healthcare staff group. It was reported that this difference was due to the preference of the mother for cesarean delivery (Akyol, Gonen-Yagci and Tekirdag, 2011).

In our study, 67.0% of the students stated they wanted to give birth to about 1 or 2 children. In a similar study which investigated the factors affecting the delivery mode preference of the midwifery and nursing students, it was reported that 66.3% of the students wanted to have 1 or 2 children in the future, 90.6% were born on a normal delivery, and that 76.5% wanted normal delivery. According to the study, the majority of the students frequently heard about normal birth histories in their circles (Aksu and Ozsoy, 2015). Similarly, it was also found in our study that the students usually heard about normal birth in their environment.

Fear of birth is defined as the fear felt before, during, and after the birth and it affects not only pregnant women but also those who are not pregnant. Socio-demographic, obstetric and psychosocial factors cause fear of childbirth (Cicek and Mete, 2015). Fear of birth also affects the decision-making process of the pregnant women. It has been shown that most pregnant women who prefer caesarean delivery choose this birth type due to their fear of birth (Bulbul et al., 2016, Gozukara and Eroglu, 2008). In a study by Kapisiz et al. (2017) on the birth perception of nursing students, it was found that the students generally had a positive perspective about the birth process, but they also had birth fear. Another study conducted on university students reported that 32.9% of the students were afraid of giving birth, 20.2% were afraid of giving birth to a disabled or sick child, and that 17.9% had a fear of perineovaginal fracture (Handan O and Gulay R, 2017). In a study conducted in Brazil, it was stated that fear of birth was the reason why the students preferred cesarean birth (Stollet.al, 2009). Similarly, most of the students in our study were found to have birth fear. As a result of the studies, it is thought that birth preparation courses and midwife support can play an active role in reducing the fear of childbirth. It is recommended that similar studies should investigate the causes of birth fear.

### Conclusion

According to the study, it was determined that the majority of the participants wanted to give birth to 1 or 2 children, they had birth fear, and that they wanted a physician in their delivery. As a result of the study, it was determined that most of the students studying in different departments at the university were born on a normal birth and that these students would choose a normal

delivery for their own in the future. Additionally, students who frequently heard about normal delivery histories in their circles were found to most likely prefer normal delivery for their future birth. Despite the current rising cesarean rates, it is very important that most of the future mothers prefer normal birth. With the provision of effective and high-quality prenatal services, it is predicted that births will be normalized, births administered by midwives will increase, and cesarean rates will be reduced.

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