# Identifying the Women's Choice of Delivery Methods of and the Factors that Affect Them

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#### **Abstract**

**Objective:** This study aims to identify the women's choice of delivery methods of and the factors that affect their choice of delivery method.

**Methods:** The study has been conducted in Eskişehir Zübeyde Hanım Kadın Hastalıkları Doğum ve Çocuk Hastalıkları Hospital and Eskişehir Kadın Hastalıkları Doğum ve Çocuk Hastalıkları Hospital. In this descriptive study, a total of 500 women, the loğusa women in services and pregnant women applied to clinics on Wednesdays and Thursdays between July and August 2006 consisted the study group. A questionnaire including questions about demographic and obstetric histories and the choice of birth methods was used to collect the data.

**Results:** The rate of cesarean among the study participants is 24.4%. Age, education, income level, age of marriage, availability of information on the birth choices, number of living children in obstetric histories, number of previous births and experience of abortus are all found statistically significant on the choice of birth methods.

**Conclusion:** In the study, approximately one fifth of women prefer cesarean birth. With 47% the main factor towards the choice of cesarean is reported as the guidance of doctors. 35% of women who prefer natural birth reported that they think natural birth is healthier.

**Keywords:** Caesarean, section, delivery method.

#### Kadınların doğum şekli tercihlerini etkileyen faktörler

Amaç: Bu çalışma kadınların doğum şekli tercihlerini ve bunu etkileyen faktörleri belirlemek amacıyla yapılmıştır.

Yöntem: Araştırma; Eskişehir Zübeyde Hanım Kadın Hastalıkları Doğum ve Çocuk Hastalıkları Hastanesi ile Eskişehir Kadın Hastalıkları Doğum ve Çocuk Hastalıkları Hastanesi'nde gerçekleştirildi. Tanımlayıcı olarak yapılan bu çalışmada; Temmuz-Ağustos 2006 tarihleri arasında Çarşamba ve Perşembe günleri hastanelerin doğum servislerinde bulunan loğusalar ve hastane polikliniklerine başvuran gebelerden, araştırmayı kabul eden 500 kadın çalışma grubunu oluşturdu. Verilerin toplanmasında kişilerin demografik, obstetrik öykülerini ve doğum şekli tercihlerini belirleyen soruların yer aldığı veri toplama formu kullanıldı.

**Bulgular:** Katılımcıların sezaryen doğumu tercih oranı %24.4'tü. Kadınların doğum tercihleri ile yaş, eğitim durumu, gelir durumu, evlenme yaşı, tercihlerle ilgili bilgi alma durumu ve obstetrik öykülerinde yer alan yaşayan çocuk sayısı, önceki doğum sayısı ve abortus deneyimleri değerlendirildiğinde aralarında istatistiksel olarak anlamlı ilişki bulundu (p<0.05).

**Sonuç:** Çalışmamızda kadınların yaklaşık beşte biri sezaryen doğumu tercih etmektedirler. Bu tercihin nedenlerinin başında %47 oranı ile hekim yönlendirmesi olduğunu ifade etmişlerdir. Kadınlar, normal doğumu tercih nedenlerinin başında da %35 oranı ile normal doğumun daha sağlıklı olduğunu düşündüklerini belirtmişlerdir.

Anahtar Sözcükler: Sezaryan, vaginal doğum, doğum yöntemi.

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### Introduction

The pregnant women worry about the birth type during the pregnancy period. Although pregnancy and birth is a physiological event, it is an important source of stress for a woman. While the prospective mother is waiting for the birth moment unknown for herself with fear and excitement, she feels both the maternity instincts and the pride of bringing a baby to the world. Especially during the first pregnancy, a woman has a lot of feelings together and she does not know what she will meet at birth. While the women are trying to determine the birth type, they cannot decide that the caesarean delivery or the normal birth will be better for them. The period of decision can be affected by a lot of factors. The women can make a better and healthier preference if they are given enough support and information during this period. The pregnant women must be well informed about the normal birth and the caesarean delivery especially during the last trimester. The caesarean section is a surgical procedure in which incisions are made through a mother's abdomen (laparotomy) and uterus (hysterotomy) to deliver the fetus over 500 gram.<sup>1,2</sup> At first, caesarean was applied to a woman who was about to die to deliver the living fetus but later it had a wide range of indications after the discovery of the antibiotics and the development of the surgical techniques and the safe blood transfusion.2 The caesarean indications includes malpresentation, placenta previa, antepartum bleeding, placenta accreta, prolonging birth, urgent caesarean section, uterine rupture, premature birth, low-birth weight, early age pregnancy and stillbirth borns in the second pregnancies; however, the caesarean sections performed due to the mother's desire take place as the first in the ranking of the caesarean indications.3 However, it is known that the caesarean section increases the maternal mortality and morbidity and the risk of perinatal morbidity.4 On the other hand, its high cost is also another difficulty for the economy of the country. It is noted that in the United States of America 50% more money is spent on caesarean sections compared to vaginal birth, and this costs the country more than a billion dollars per year.5 Despite its increasing cost and risks, an increase in caesarean sections from 5% to 20% has been observed in all developed countries in recent years.<sup>6,7</sup> Among the reasons of the increase in the rates of caesarean are later age pregnancy, decline in the parity, developed imaging techniques, widespread use of electronic fetal monitor, common use of supportive reproduction techniques, malpractice, medico-legal problems and for these reasons the desire of abstaining from accouchement force complications and also some social factors. 6,8,9 The increase of the caesarean prevalence is defined as an international health problem. While the rate of caesarean declared by the World Health Organisation in 2002 was 10-15%, this rate is 27.3% in America, 41% in India, 22.8% in Nigeria and 37% in Turkey.<sup>10,11</sup> The midwives can play an important part in the birth policies f their countries in order to prevent pointless attempts and to decline the caesarean rates by emphasizing the normal birth process. It was proved by well quality studies that the women who took well midwifery care during the pregnancy lay in hospital less in the antenatal period, and they needed labour induction less, and they were applied less analgesia and narcosis during their birth, nonpharmacologic methods were used more to cope with the pain, and there was an increase in the spontaneous birth rates and a decrease in the caesarean rates.12 The opinion the pregnant women can not be given the midwifery care effectively is accepted all over the world as one of the important reasons of the rapid increase in

the caesarean rates in the world. Today the main purpose of current midwifery practices is to make vaginal birth in which the pelvic floor is kept safe and the level of pain and anxiety is low or lacking. In this study, the birth preferences of the women and the factors affecting these preferences were assessed.

### **Methods**

The research was conducted in Eskisehir Zubeyde Hanım Gynecology and Obstetrics and Children's Hospital and Eskisehir Gynecology and Obstetrics and Children's Hospital. In this descriptive study, the study group was formed of 500 women, accepting the research, who were the puerpera in the maternity wards of the hospitals and the pregnant women applying to the polyclinics of these hospitals on Wednesdays and Thursdays between July-August 2006. In the data collection process, a data collection form including the questions determining the women's demographic and obstetric characteristics and birth type preferences was used. The face-to-face discussion technique was used for the data and the necessary time to fill in the form was 10 minutes. The official authorization was got from the institutions for the research and after the participants were informed about the research the form was signed. The data were assessed by using Statistical Package for the Social Science (SPSS) 13.0 for Windows Programme. Percentage and chi-square techniques were used for the evaluation.

#### **Results**

The preference rate of caesarean delivery of those participating the study is 24.4%. 50.8% of the participants are high school graduate and over, 59.4% of them are not working and the income level of 76.8% of them is under 1000TL. The marital age of 20% of the women participat-

**Table 1.** The distribution of the socio-demographic characteristics of the participants.

Socio-demographic characteristics	Number (n)	Percentage (%)
Age		
19 and under	7	1.4
20-29	187	37.4
30-39	269	53.8
40 and over	37	7.4
Educational background		
Illiterate	27	5.4
Literate	30	6.0
Secondary Education	189	37.8
High School Education and Over	254	50.8
Working state		
Working	203	40.6
Not working	297	59.4
Income level		
0-999 TL	384	76.8
1000 TL and over	116	23.2
Marrigeable age		
18 and under	100	20.0
19 and over	400	80.0
Marital duration		
1-5 years	163	32.6
6-10 years	114	22.8
11 years and over	223	44.6
Birth preference		
Cesarean	122	24.4
Normal birth	378	75.6
Total	500	100.0

ing the study is 18 and under and the marital duration of 44.6% of them is 11 years and over (Table 1). Of the women joining the research, 62% of the group preferring the caesarean delivery and 51% of those preferring the normal birth were between 30-39. The more the age of giving birth raised the more the caesarean preference rate rose. There was a significantly difference in the statistical evaluation between the age groups of the participants and their birth preferences (p<0.05). On the other hand, in the evaluation between the education levels of the women in the research group and their birth preferences, those who were high school graduate and over

formed of 60% of those preferring caesarean delivery, and it was determined that those who had higher education level preferred caesarean much more and in the statistical evaluation the difference between them was found significantly (p<0.05). It was stated that among the women participating the study the income level of 80% of the group preferring the normal birth was under 1000 TL. In the statistical evaluation

between the income level of the participants and their birth preferences, the difference between them was found significantly (p<0.05). 61% of the women preferring the normal birth were not working and the marital duration of 47% of them was 11 years and over. In the statistical evaluation between birth preferences and the participants' working states and their marital duration, a statistically significantly difference between them was

**Table 2.** The distribution of the participants' birth preferences according to their socio-demographic characteristics .

	Birth pr	eferences					
	Cesarean	Vaginal	Total	n %	n %	n %	р
Age							
19 and under	0	0.0	7	2.0	7	1.4	P<0.05
20-29	44	36.0	143	38.0	187	37.4	
30-39	75	62.0	194	51.0	269	53.8	
40 and over	3	2.0	34	9.0	37	7.4	
Educational background							
Illiterate	0	0.0	27	7.0	27	5.4	P<0.05
Literate	8	6.0	22	6.0	30	6.0	
Secondary Education	41	34.0	148	39.0	189	37.8	
High School Education and Over	r 73	60.0	181	48.0	254	50.8	
Income level							
0-999 TL	82	67.0	302	80.0	384	76.8	P<0.05
1000 TL and over	40	33.0	76	20.0	116	23.2	
Working state							
Working	55	45.0	148	39.0	203	40.6	P>0.05
Not working	67	55.0	230	61.0	297	59.4	
Marrigeable age							
18 and under	10	8.0	90	24.0	100	20.0	P<0.001
19 and over	112	92.0	288	76.0	400	80.0	
Marital duration							
1-5 years	45	37.0	118	31.0	163	32.6	P>0.05
6-10 years	32	26.0	82	22.0	114	22.8	
11 years and over	45	37.0	178	47.0	223	44.6	
The place of birth							
Home	0	0.0	24	6.0	24	5.0	P>0.05
State Hospital	82	67.0	254	67.0	334	67.0	
Private Hospital	40	33.0	103	27.0	142	28.0	
Information state							
Uninformed	9	7.0	68	18.0	77	15.0	P<0.05
Health staff	96	79.0	246	65.0	342	69.0	
Friends, family	10	8.0	55	15.0	65	13.0	
Magazines, TV, etc.	7	6.0	9	2.0	16	3.0	
Total	122	100.0	378	100.0	500	100.0	

not found (p<0.05) In the statistical evaluation between the marital age of the women and their birth preferences, the difference between them was highly significantly (p<0.001); it was stated that the marital age of 92% of the group preferring the caesarean delivery was 19 and over. Among the participants, while 67% of the group preferring the caesarean delivery preferred the state hospitals, 33% of them preferred private hospitals. In the statistical evaluation between birth preferences of the participants and the place where they would deliver, it was determined that there was not a statistically significantly difference between them (p<0.05). In the statistical evaluation between birth preferences of the women participating the research and their being informed about these preferences, the difference between them was found significantly (p<0.05). In the evaluation, 65% of the women preferring normal birth and 79% of the women preferring caesarean delivery stated that they got information from the health staff, but it was stated that 15% of all participants did not get information about their birth preferences. In the statistical evaluation between birth preferences of the participants and the number of their living children and their previous birth types, the difference between them was found highly significantly (p<0.001). While among the women preferring caesarean section the rate of those having no living children was18%, among those preferring normal birth the rate of the same group was only 9%. While the next birth preference of the group whose previous birth type was normal birth was again normal birth with a rate of 63%, the normal birth preferences of the women whose previous birth type was caesarean section were found 18%. It was stated that the previous birth type of 43% of the participants preferring caesarean delivery was normal birth. When the women's having abortus in their obstetric histories and their birth preferences were compared,

the difference between them was found statistically significantly (p<0.05). It was determined that 39% of those preferring caesarean delivery had abortus in their obstetric histories and this rate was 25% in those preferring normal birth. A statistically significantly difference was not found between birth preferences and pregnancy numbers of the women participating the study (p<0.05). In this study, it was stated that the preference reasons of caesarean section of the women participating the research were 47% doctor demand, 19% their own demand, 18% the fear of normal birth, 11% late age, and 5% believing in caesarean section healthier. On the other hand, the preference reasons of those preferring normal birth were 35% believing in normal birth healthier, 18% doctor demand, 16% its being spontaneous in hospital, 14% the wish to get better soon, 10% to increase maternal instinct, and 7% economic reasons (Table 2).

## Discussion

Although the increase of caesarean prevalence is defined as an international health problem, a rapid increase has been seen in the rates of caesarean delivery all over the world for the last 25 years.13 In our country the rate of caesarean delivery is 37% according to the data of Turkey Population Health Research (TPHR) 2008; and it has been declared that this rate is 42% in cities and 24% in the countryside. The rate of caesarean has highly increased compared to TPHR 2003 (21%). While the probability of caesarean delivery increases due to the age of the mother, it is declared that 45% of the first births are caesarean. The rate of caesarean increases together with the level of education and prosperity. The rate of caesarean is 60% or over in the highest level of education and prosperity, and it is determined that this rate is three times more than the caesarean sections in the

lowest level of education and prosperity.<sup>10</sup> In our study, the preference rate of caesarean delivery of all participants is 24.4%. While caesarean preference rate of the women was 16% in the thesis study by Bektas in İstanbul,14 it was 22.6% in another study done in our country. 13 In the studies abroad Taffel and Lydon determined the rate of caesarean as 23%.15,16 In our study, 62% of the group preferring caesarean was women between 30-39. Moreover, it was noted that the participants having high school training and over formed 60% of those preferring caesarean delivery and these results were found significantly in the statistical evaluation (p<0.05). In the statistical evaluation between the marital age of the women and their birth preferences, the difference between them was found highly significantly (p<0.001), and it was stated that the marital age of 92% of the group preferring caesarean delivery was 19 and over. In the studies, it was determined that the older and the higher education the mother had, the higher the caesarean section rate was.8,10,17,18 In the study done by Duman and his friends, it was stated that the higher education the women had the higher the caesarean rate was. 19 Taffel stated in his study that rising the pregnancy age, delaying the age of becoming pregnant and increasing the socio-culture and education level increased the caesarean rate.15 In a study in our country, it was determined that the marital age became late for the reasons such as education and economic and social problems, and so the births at 35 and over increased. In the same study, it was drawn attention that total caesarean rates of the pregnant women who were at 35 and over formed 15% of the rates in them.20 It was thought that these results paralleling with our study could result from increasing rates of pregnancy of 35 age and over, the developments on auxiliary reproduction techniques and more common use of these techniques. It

was stated that among the women participating the study the income level of 80% of the group preferring the normal birth was under 1000 TL and this result was found significantly in the statistical evaluation (p<0.05). Moreover, in this study 61% of the women preferring the normal birth were not working. In the study of Hildingsson and his friends, it was stated that the women having low economic level preferred caesarean; however, in the study of Yasar and his friends it was stated that having high economic level increased the rate of caesarean.8,21 The caesarean section is associated with high morbidity and mortality risk and it increases the rate of danger for next births and also costs because of postnatal care services. 10,18,22 Furthermore, it is stated by a lot of studies that the caesarean delivery is a serious difficulty for the economy of the countries. It is determined that at least 50% more money is spent on caesarean sections compared to normal birth.<sup>5,23</sup> When compared to normal birth, the cost of hospital also increases since the period of staying at hospital for the caesarean delivery and additional treatment and applications which will be used as result of developing complications will be much more. It is thought that the people whose income is low or who do not have social security often prefer normal birth since the health expenses are higher for the caesarean delivery. In the studies, although it was stated that having private insurance and preferring a private hospital for the birth also increased the rate of caesarean, in this study in the statistical evaluation between the birth preferences and the place preferences where the birth would be given the difference between them was not found significantly (p<0.05). Konakcı and Kılıc stated that the reasons affecting the caesarean section were both the increase of the women's education and socioeconomic level and living in big cities and giving birth in private hospitals.7 It is thought that the increase in the caesarean section preference rates of the women preferring private hospitals can be related to their income level. In this study, it was stated that the caesarean delivery preference rate of the primapara women was two times more than normal one. Moreover, it was found that while the next birth preference of the group whose previous birth type was normal was again normal birth with the rate of 63%, the normal birth preferences of those whose previous birth type was caesarean were 18%. In the statistical evaluation between the birth preferences of the participants and the number of their living children and their previous birth types, the difference between them was found highly significantly (p<0.001). In Yasar and his friends' study called "the birth preferences of primipara women and the factors affecting these" it was stated that the rate of normal birth in primipara women was 34% and caesarean rate was 65.9%. In the same study, it was determined that while 86.9% of the women having normal birth stated they wanted to have normal birth again, 45.4% of the women having caesarean delivery stated they wanted to have normal birth in their next births.8 In a study done abroad, when the next birth preference was searched, 90% of the women having normal birth stated they wanted to have normal birth again and 77% of the women having caesarean delivery wanted to have normal birth in their next births.24 In a study done in our country, it was found that normal birth preference rate of the women having normal birth was 86.9% and normal birth preference rate of those having caesarean section for their next births was 45.4%.25 Moreover, in our study, it was also determined that the previous birth type of 43% of the participants preferring caesarean section was normal birth. Another reason increasing the caesarean rates is that having one caesarean

section forms the caesarean indication for the next births. However, clinical applications recently have shown that 60-80% of the old caesareans could have vaginal birth.<sup>25,26</sup> In our research, it was determined that 39% of those preferring caesarean section had abortus in their obstetric histories and this rate was 25% in those preferring normal birth and this result was found significantly statistically (p<0.05). The doctors' studies about the birth preferences has shown that while 91% of the gynecologists prefer vaginal birth, about half of them believe the patients have the caesarean preference right, but at the decision stage they decide the birth type with their own preferences, not with the preferences of the phenomenon.<sup>26,27</sup> According to TPHR, the doctors helped 64% of the births in the five years before 2008 and the midwives and / or nurses helped 27% of them. Furthermore, it has been stated that 92% of the mothers having birth in the five years' period before TPHR-2008 had antenatal nursing care from health staff during their last pregnancy. It has drawn attention that almost all antenatal nursing care was given by doctors. Moreover, in the report, it has been determined that the caesarean rate in the pregnant women followed by doctors is higher than the ones followed by midwives.<sup>10,28</sup> All these results has shown how important the personal preferences are in the increasing caesarean rates recently. The women's caesarean delivery preference is an important subject. Low caesarean rates in developed countries like Holland are a result of the woman's in these countries getting quality and qualified care, monitoring, training and consulting services from preconceptional period to postnatal period.<sup>29,30</sup> In another study done to investigate the doctor's effect on the woman's caesarean decision, it is stated that the mother's desire is in fact the doctor's guidance and mothers firstly want them to do the right thing for their babies. In Sayın and his friends' studies, one of the first reasons why women prefer caesarean is that women are afraid of suffering from birth and the baby's having trauma and also social reasons and doctor's suggestion.28 In a study done in Italy, while 65% of the midwives find the caesarean rates high, only 34% of the doctors find the rates high.23 In this study, the caesarean delivery preference rate with the mothers' own desires is 19%. This rate differing among countries is 2% in Ireland, 7% in England, and 46% in America.<sup>21</sup> In other studies in our country, the caesarean section preference rate with the mothers' own desires was found 26.8% by Gungor and his friends and 11.3% by Ozkaya.<sup>29,30</sup> American College of Obstetricians and Gynecologists (ACOG), in a declaration on this matter on 9th May 2006, stated that caesareans must be applied for medical reasons, not for desire.31 The Health Ministry has started to research births and their results in public and private health institutions in the whole country in order to conserve mothers' health. In this respect, the caesarean indications and following the results are also important. The most important precautions to reach this target are following medical reasons and indications suggested by modern gynecology, keeping the patient records in a certain form and application unity, keeping the statistics correctly and obeying the ethical rules.32

#### Conclusion

In this study, the caesarean section preference reasons of the women participating the research were stated as the doctor's demand, their own desire, fear of normal birth, late age, and thinking caesarean section healthier. It is notable that the doctor's demand is the premier among the reasons of the caesarean delivery preference. The normal birth preference reasons of them were also stated as believing normal

birth healthier, the doctor's demand, its being spontaneous in hospital, the wish to get better soon, increasing maternal instinct, and economic reasons. Encouraging the society to normal birth by declining the caesarean delivery rates is very important in terms of both women's health and its cost in the economy of the country. In this respect, the society must be made conscious by health professionals, and the scope of midwives and nurses must be extended in our country's health system based on health policies in which treatment services are given predominantly. Having the right preference of the woman about her own birth will be healthier by getting quality and qualified care from preconceptional period to postnatal period and by making good use of consulting services about alternative birth, relaxing techniques and coping with the travail.

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