

# Women's view on a caesarean section performed on request

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## Abstract

The study was conducted in the period from February to May 2018. It involved 200 women. The research tool was an author's internet survey. The questionnaire included questions related to sociodemographic factors such as age, education, place of residence, marital status, financial status, number of pregnancies and the method of termination of pregnancy, the knowledge and opinions on the Caesarean section and the complications it entails.

The aim of this study was to review the opinions of women about the Caesarean section on request.

Almost half of the respondents (47.4%) over 35 years old would decide to have a Caesarean section without medical indications, much less in the age group 18-25 (26.7%) and 26-35 (20.8%) ( $p=0.048$ ). There was also a correlation between age and the knowledge of complications of the Caesarean section.

As many as 52.4% of respondents with primary/vocational education would decide to have a Caesarean section performed without medical indications. In the remaining groups this percentage was much lower – secondary education – 17.9%, bachelor's degree – 28.9% and master's degree – 22.4% ( $p=0.014$ ). There was also a correlation between the education and the knowledge of the complications after the Caesarean section. Most of women with primary/ vocational education (61.9%) did not know any complications, this answer was chosen the least among women with a bachelor's degree – 24.4% ( $p= 0.001$ ).

In conclusion, women have different view on a Caesarean section performed on request. It depends among others on the age and the education – women with primary/ vocational education and older women are more willing to choose this method of labour.

## Key words:

Caesarean section,  
maternal request,  
complications,  
delivery, labour

## Introduction

Labour is one of the most important moments in life for both parents. It is associated with many strong emotions, from anxiety to happiness. Providing young women with the very advantages of terminating pregnancy with a Caesarean section causes in their subconsciousness that surgical delivery is less painful than natural labour [1-3].

According to the Polish Gynaecological Society, Caesarean section is defined as „a surgical procedure aimed at the termination of pregnancy or labour in the case when further delay in their natural course presents a danger for the mother and child”. [4]. The recent years have shown an upward trend in the number of indications for Caesarean sections. Moreover, the choice of the method of delivery after previous Caesarean section is discussed. Each surgical termination of pregnancy should be documented with medical indications [5].

The literature presents various criteria of indications for a Caesarean section. Structuring the division taking into consideration their rational use is the most practical [5-7]. We distinguish between: elective indications (planned) and emergency indications (urgent). There are also nonobstetrical indications for a Caesarean sections, e.g. ophthalmological or orthopaedic [5].

Caesarean section „on request” is defined as a Caesarean delivery on request/demand of a pregnant woman without the presence of medical indications, before the onset of uterine contractile activity. For a long time, there has been a debate concerning the ethical and legal aspects of correctness of this operation performed at the patient`s request. Those accepting this position invoke the right of choice and the freedom to make decisions about their own life and autonomy. They also refer to medical aspects, i.e. traumatic births and consequences for both mother and child [8-10]. According to WHO, only 10-15% of births should result in the surgical termination of pregnancy. However, in wealthier European countries, pregnancies are terminated by caesarean sections in 30-40%. In Poland there are no published data concerning the practice of performing caesarean sections on request, however, it is estimated that they account for 6-50% [11].

The aim of this study is to review the opinions of women about the Caesarean section on request.

## Materials and methods

The study was conducted in the period from February to May 2018. The study involved 200 women. The basic selection criteria were patients after childbirth or women planning pregnancy and the patient`s voluntary consent. The majority of the respondents gave birth in the past – 145 women. The research tool was an author`s internet survey. The questionnaire consisted of 25 questions, 8 of which were related to sociodemographic factors such as age, education, place of residence, marital status, financial status, number of pregnancies and the method of termination of pregnancy. The rest of the questions concerned the knowledge on Caesarean section, choice of the method of terminating the pregnancy.

## Results

The study involved 200 people. Most of the respondents had master`s degree – 67 persons (33.5%) and secondary education – 67 persons (33.5%). Bachelor`s degree had 45 respondents (22.5%), vocational education – 18 (9%), and primary education – 3 (1.5%). 139 of the surveyed women lived in the city (69.5%), while in the countryside the remaining 61 (30.5%). There were 106 (53%) female respondents aged 25-35, 75 (37.5%) from 18-25, and 19 (9.5%) over 35. In the study group there were 64% – 128 women who were married. In an informal relationship there were 21% – 42 respondents. Moreover, 14.5% of the respondents were maids – 29 women. One woman was divorced. The majority of the respondents considered their financial situation as good – 129 (64.5%). Their financial situation was assessed as average (25.5%) by 51 respondents, as very good – 19 (9.5%), as bad – 1 (0.5%). Most of the respondents were pregnant and gave birth – 144 (72.5%). Among them, 73 gave birth by natural labour (50.3%), through caesarean sections – 65 (44.8%), while both forms of birth – 7 (4.8%).

The method of delivery was decided by medical recommendation in case of 80 women (55.2%),

whereas in case of 65 women (44.8%) it was an own decision. In most cases, pregnant women were under doctor's supervision (71%). 30.3% of women attended the birthing school.

The study showed a statistically significant correlation between who provided the antenatal care and the knowledge of respondents about the possibility of giving birth to a child by natural labour after a previous Caesarean section ( $\text{Chi}^2=13.073$ ;  $p=0.011$ ) (Table 1). Among women who were under the care of a doctor, the percentage of respondents who believed that it was possible to give birth to a child by natural labour after a caesarean section was the highest – 80.6%. Slightly lower was the percentage of respondents whose antenatal care was provided by a doctor and a midwife – 79.4%. Among women who were under the care of a midwife alone, this opinion was shared by only 37.5%.

An analysis of the correlation between the source of information about labour and puerperium and the evaluation of their knowledge by the respondents ( $\text{Chi}^2=13.073$ ;  $p=0.011$ ) (Table 2) was conducted. 41% of the respondents, who obtained knowledge from professional literature, and 32.2% of the women, who stated the healthcare professional as the source, assessed their knowledge as very good. In the case of obtaining knowledge from women's press it was

only 13.3%. In the group of women whose source of knowledge was the Internet/media or family/ friends, the percentage of women with very good knowledge was comparable and amounted to 20.7% and 24.1%, respectively.

The correlation between the opinion on whether the recovery period after Caesarean section is longer than after natural labour and deciding upon the way to terminate the pregnancy ( $\text{Chi}^2=15.665$ ;  $p=0.001$ ) was shown (Table 3). The study shows that 92.1% of women who believe that Caesarean section should be performed only on medical indications agree that the period of convalescence after such a procedure is longer than after the natural labour. Among the respondents who believe that a woman should have the right to decide exclusively on the method of termination of pregnancy regardless of medical indications, the percentage of women who share the opinion about a longer period of convalescence after Caesarean section is the lowest – 72.7%.

Statistical analysis showed significant correlations between the respondents' education and their knowledge about the delivery ( $\text{Chi}^2=24.716$ ;  $p<0.001$ ), the decision about Caesarean section without medical indications ( $\text{Chi}^2=10.633$ ;  $p=0.014$ ), opinion on convalescence after Caesarean section and natural labour ( $\text{Chi}^2=9.940$ ;  $p=0.019$ ), attending birth school

**Table 1.**

The relationship between the doctor/medwife providing the antenatal care and the respondents' knowledge of the possibility to deliver another child by natural labour after a Caesarean section

Who provided the antenatal care?	Do you believe it is possible to deliver another child by natural labour after a Caesarean section?			Total
	Yes	No	I don't know	
Doctor	83	5	15	103
	80,6%	4,9%	14,6%	71%
Midwife	3	0	5	8
	37,5%	0,0%	62,5%	5,5%
Doctor and midwife	27	0	7	34
	79,4%	0,0%	20,6%	23,4%
Total	113	5	27	145
	77,9%	3,4%	18,6%	100,0%

$\text{Chi}^2 = 13.073$ ;  $p=0.011$

**Table 2.**

The relation between the source of information about labour and puerperium and the knowledge on labour

How did you obtain information about pregnancy, labour, puerperium?	How do you assess your knowledge on labour?			Total [N=144]
	Very good	Good	Average/ poor	
Internet/media	24	66	26	116
	20,7%	56,9%	22,4%	80,6%
Family/friends	19	40	20	79
	24,1%	50,6%	25,3%	54,9%
Healthcare professional	28	45	14	87
	32,2%	51,7%	16,1%	60,4%
Professional literature	25	27	9	61
	41,0%	44,3%	14,8%	42,4%
Women's press	4	19	7	30
	13,3%	63,3%	23,3%	20,8%
Chi2 =13.073; p=0.011				

Cross table for multiple-choice question.

**Table 3.**

The relationship between the opinion on whether the recovery period after Caesarean section is longer than after the natural birth and deciding on the method of termination of pregnancy

Do you believe a woman should:	Do you believe that the period of convalescence after Caesarean section is longer than after natural birth?		Total
	Yes	No	
Have the exclusive right to decide on the method of termination of pregnancy regardless of medical indications	16	6	22
	72,7%	27,3%	11%
Decide with the medical team about the method of delivery regardless of medical indications	77	12	89
	86,5%	13,5%	44,5%
Have a Caesarean section performed strictly on medical indications	70	6	76
	92,1%	7,9%	38%
I do not have an opinion	7	6	13
	53,8%	46,2%	6,5%
Total	170	30	200
	85,0%	15,0%	100,0%
Chi <sup>2</sup> =15.665; p=0.001			

( $\text{Chi}^2=16.316$ ;  $p=0.001$ ) and knowledge of complications after a Caesarean section in relation to maternal health ( $\text{Chi}^2=39.603$ ;  $p=0.001$ ) (Table 4). Respondents with bachelor's and master's degree usually assessed their knowledge of delivery as very good – 40% and 35.8%, respectively and good – 33.3% and 49.3%, respectively. The majority of women with primary/vocational and secondary education assessed their knowledge on a good level – 76.2% and 58.2%, respectively. As many as 52.4% of respondents with primary/vocational education would decide to have a Caesarean section performed without medical indications. In the remaining groups this percentage was much lower.

Similarly, most respondents with primary/vocational education believed that the period of convalescence after a Caesarean section was no longer than after natural labour – 38.1%, while women with such an opinion and bachelor's degree constituted – 11.1%, master's degree – 11.9%, while with secondary education – 13.4%. The highest percentage of women who attended a birthing school were respondents with a master's degree – 49%, while the lowest percentage were respondents with a primary/vocational degree – 5.9%. It was shown that among women with primary/vocational and secondary education, significant part did not know any complications after Caesarean section – 61.9% and 49.3%, respectively. In all groups, the most common known complication was endometriosis in the postoperative scar. Those with higher education often indicated bladder injury as a response – 55.6% with bachelor's degree, 47.8% with master's degree.

The study showed a correlation between the age of the respondents and the attendance at the birthing school ( $\text{Chi}^2=9.314$ ;  $p=0.009$ ), the decision to have a Caesarean section without medical indication ( $\text{Chi}^2=6.093$ ;  $p=0.048$ ), the opinion on convalescence after Caesarean section and natural labour ( $\text{Chi}^2=7.237$ ;  $p=0.027$ ) and the knowledge of complications after Caesarean section in relation to mother's health ( $\text{Chi}^2=43.242$ ;  $p<0.001$ ) (Table 5). The highest percentage of respondents who attended the birthing school were women in the age of 26-35 (40.5%), the lowest women in the age of 18-25 (14.9%). Almost half of the respondents (47.4%) over 35 years old would decide to have a Caesarean section without medical

indications, much less in the age group 18-25 (26.7%) and 26-35 (20.8%). As many as 93.3% of the respondents in the age of 18-25 years believe that the period of convalescence after a Caesarean section is longer than after natural labour. In the remaining age groups this opinion was supported by 81.1% in the group of 26-35 and 73.7% in the group over 35. Among complications after a Caesarean section, women in the age of 18-25 years most often pointed to endometriosis in the scar after a Caesarean section (57.3%) and bladder damage (44%). Among the respondents in the age category 26-35 years, the answer „I do not know any complications” dominated (50%). Those over 35 years old most often indicated bladder damage (68.4%).

Statistical analysis showed a relationship between the place of residence of the respondents and the attendance at the birthing school ( $\text{Chi}^2=8.973$ ;  $p=0.003$ ). Significantly more women residing in the city attended a birthing school (38.8%) than respondents living in the village (12.8%).

There was also a correlation between the financial situation and the assessment of their knowledge on labour by the respondents ( $\text{Chi}^2=9.787$ ;  $p=0.044$ ). Among women declaring their financial situation as very good and good, the highest number assessed their level of knowledge about labour as good – 47.4% and 58.9% respectively. Among the respondents with a bad/average financial situation, each of the knowledge categories – very good, good, average/low – was represented by about 1/3 of women

## Discussion

The increasing number of Caesarean sections over the last years is a discussion and a reason for a large number of scientific analyses. Currently, doctors have to deal with the problem of performing Caesarean sections on request. Many authors are trying to examine women's opinions about a Caesarean section and the causes of this problem.

Such research was conducted by Mieczkowska K. et al. The study involved 156 women. The majority of respondents favoured a natural labour (60.6%), whereas delivery by a Caesarean section would have been chosen by 28.4% [12].

**Table 4.**

The relationship between the education and the knowledge on labour, the decision to have a Caesarean section without medical indications, the opinion on convalescence after Caesarean section and natural health, the attendance at the birth school and the knowledge of complications after Caesarean section in relation to mother's health

		Education					
		Primary/vocational	Secondary	Bachelor's degree	Master's degree	Total	
How do you assess your knowledge on labour?	Very good	0	9	18	24	51	Chi <sup>2</sup> =24.716; p<0.001
		0,0%	13,4%	40,0%	35,8%	25,5%	
	Good	16	39	15	33	103	
		76,2%	58,2%	33,3%	49,3%	51,5%	
Average/ poor	5	19	12	10	46		
	23,8%	28,4%	26,7%	14,9%	23,0%		
Total	21	67	45	67	200		
Would you decide to have a Caesarean section without medical indications?	Yes	11	12	13	15	51	
		52,4%	17,9%	28,9%	22,4%	25,5%	
	No	10	55	32	52	149	
		47,6%	82,1%	71,1%	77,6%	74,5%	
Total	21	67	45	67	200		
Do you believe that the period of convalescence after Caesarean section is longer than after natural birth?	Yes	13	58	40	59	170	Chi <sup>2</sup> =9.940; p=0.019
		61,9%	86,6%	88,9%	88,1%	85,0%	
	No	8	9	5	8	30	
		38,1%	13,4%	11,1%	11,9%	15,0%	
Total	21	67	45	67	200		
Did you attend a birth school?	Yes	1	9	10	24	44	Chi <sup>2</sup> =16.316; p=0.001
		5,9%	18,4%	33,3%	49,0%	30,3%	
	No	16	40	20	25	101	
		94,1%	81,6%	66,7%	51,0%	69,7%	
Total	17	49	30	49	145		
Please check the complications you are aware of after Caesarean section in relation to the mother's health – multiple choice question (cross table)	Intraoperative bowel injury	3	11	13	19	46	Chi <sup>2</sup> =39.603; p=0.001
		14,3%	16,4%	28,9	28,4	23%	
	Endometriosis in the Caesarean section scar	7	27	25	30	89	
		33,3%	40,3%	55,6%	47,8%	44,5%	
	Peritonitis	3	13	12	23	51	
		14,3%	19,4%	26,7%	34,3%	25,5%	
	Bladder injury	5	17	25	32	79	
23,8%		25,4%	55,6%	47,8%	39,5%		
I do not know any complications	13	33	11	23	80		
	61,9%	49,3%	24,4%	34,3%	40%		
Total	21	67	45	67	200		

**Table 5.**

The relationship between the age and the attendance at the birth school, the decision to have a Caesarean section without medical indications, the opinion on convalescence after Caesarean section and natural birth and the knowledge of complications after Caesarean section in relation to mother's health.

		Age				
		18-25 y.o.	26-35 y.o.	Over 35 y.o.	Total	
Did you attend a birth school?	Yes	7	32	5	44	Chi <sup>2</sup> =9.314; p=0.009
		14,9%	40,5%	26,3%	30,3%	
	No	40	47	14	101	
85,1%		59,5%	73,7%	69,7%		
Total		47	79	19	145	
Would you decide to have a Caesarean section without medical indications?	Yes	20	22	9	51	
		26,7%	20,8%	47,4%	25,5%	
	No	55	84	10	149	
73,3%		79,2%	52,6%	74,5%		
Total		75	106	19	200	
Do you believe that the period of convalescence after Caesarean section is longer than after natural birth?	Yes	70	86	14	170	Chi <sup>2</sup> =7.237; p=0.027
		93,3%	81,1%	73,7%	85,0%	
	No	5	20	5	30	
6,7%		18,9%	26,3%	15,0%		
Total		75	106	19	200	
Please check the complications you are aware of after Caesarean section in relation to the mother's health - multiple choice question (cross table)	Intraoperative bowel injury	26	16	4	46	
		34,7%	15,1%	21,1%	23%	
	Endometriosis in the Caesarean section scar	43	40	6	89	
		57,3%	37,7%	31,6%	44,5%	
	Peritonitis	25	22	4	51	
		33,3%	20,8%	21,1%	25,5%	
	Bladder injury	33	33	13	79	
44,0%		31,1%	68,4%	39,5%		
I do not know any complications		21	53	6	80	
Total		75	106	19	200	

**Table 6.**

The relation between the dwelling place and the attendance at a birthing school

Dwelling place	Did you attend a birth school?		Total
	Yes	No	
City	38	60	98
	38,8%	61,2%	100,0%
Village	6	41	47
	12,8%	87,2%	100,0%
Total	44	101	145
	30,3%	69,7%	100,0%

Chi<sup>2</sup> =8.973; p=0.003

**Table 7.**

The relation between the financial status and the knowledge of labour

Financial status	How do you assess your knowledge of labour?			Total
	Very good	Good	Average/ poor	
Bad/ average	16	18	18	52
	30,8%	34,6%	34,6%	100,0%
Good	29	76	24	129
	22,5%	58,9%	18,6%	100,0%
Very good	6	9	4	19
	31,6%	47,4%	21,1%	100,0%
Total	51	103	46	200
	25,5%	51,5%	23,0%	100,0%

Chi<sup>2</sup> =9.787; p=0.044

In our study, 25.5% of women would choose Caesarean sections without medical indications, 74.5% would not.

In our study, an attempt was made to test the knowledge of women about complications after Caesarean sections. Lifort together with her coworkers analysed 263075 births, 108 of which resulted in the death of the mother. He estimated that the relative risk of death was 5 times higher in case of Caesarean sections performed during delivery and 1.4 times higher in case of elective Caesarean sections.

According to Clark et al., 2-6 women in the United States die annually during Caesarean sections [13].

Studies by Schuitemaker et al. report that the risk of death after Caesarean section is 0.53/1000 births [14].

Kennare analysed complications after Caesarean sections. His research demonstrated that distant effects of Caesarean sections, which threaten the lives of patients, are more common if previous deliveries were terminated surgically [11].

Phipps et al. examined a group of 1500 women, 0.28% of whom had a bladder injury. Urinary tract damage was less frequent – 0.27%/1000 deliveries. According to Dehbashi, in one third of women, if antibiotic therapy is not implemented prophylactically, endometrium inflammation occurs, reaching even 40% [15].

Our study shows that 40% of respondents do not know any complications of abdominal surgery. The possibility of the occurrence of endometriosis in the scar after a Caesarean section is known to 44.5% of all respondents. The knowledge about it is higher in women with higher education.

Kolas et al. compared newborn babies delivered by elective Caesarean sections and by natural labour. They observed a significant need for intensive therapy as a result of respiratory disorders in newborns born through Caesarean sections. Fogelson et al. associates Caesarean sections with the morbidity of newborns with TTN syndrome [16].

Fisher et al. say that reduced joy of birth may lead to depression and loss of self-confidence. Mood disorders and even depression have been observed in the group of patients who required urgent Caesarean sections [17].

In the own subjects, the reason for the decision to terminate pregnancy by a Caesarean section in 51.6% of the answers was anxiety about their own health and the health of the child, as well as fear of labour pain in 27.5%.

In Mieczkowska's study, 40.0% of the surveyed women who delivered by Caesarean sections considered that in Poland caesarean sections should be performed on request and that if the respondent had a choice, she would decide on this form of birth again. 42.7% of women after natural labour responded that in Poland Caesarean sections should not be performed on request [11].

In our research, 22 women (11.0%) indicated the answer concerning the right to decide exclusively on the method of termination of pregnancy regardless of medical indications, and 89 (44.5%) of the respondents were in favour of deciding together with the medical team about the method of delivery regardless of medical indications.

In our study, the Internet was the most frequent source of search for information about pregnancy, labour and puerperium. As much as 80.6% used this form of obtaining knowledge. The research of Opała T., Rzymyskiego P., and Stanka R. shows that 56% of women surveyed declared to use the Internet to search for information, while in the study of Wardak K. et al. women selected as the basic source of

knowledge about the course of pregnancy and labour respectively: media, family and friends, medical personnel, literature. [18,19].

## Conclusions

Respondents participating in the study mostly assess their level of knowledge about pregnancy, labour, and puerperium as good. However, they present different levels of knowledge about complications resulting from a Caesarean section. Women with primary and vocational education in majority do not know the possible complications. Among the respondents, the knowledge of bladder injury and endometriosis in the scar after a Caesarean section dominated.

There is a correlation between the education and the choice of the method of labour, if such a possibility exists. The highest percentage of respondents who would decide to have a Caesarean section without indications was found among those with primary or vocational education. In contrast, the lowest percentage of women who responded affirmatively was in the group with secondary education. Among women with higher education, about a quarter of the respondents indicated a positive answer.

Sociodemographic factors such as age, place of residence, marital status, education, socioeconomic status and the choice of the method of labour significantly correlate with many aspects related to a Caesarean section. Each independent variable has a different impact on women's knowledge of the complications of a Caesarean section on their mother's health, the beginning of lactation and the choice of the method of labour.

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