

What are Polish women afraid of in vaginal birth? – A Cross-Sectional Study

Izabela Walasik

Students Scientific Association at the 1st Department of Obstetrics and Gynecology, First Faculty of Medicine, Medical University of Warsaw, Warsaw, Poland

 <https://orcid.org/0000-0003-2908-0908>

Katarzyna Kosińska-Kaczyńska

Second Department of Obstetrics and Gynecology, The Center of Postgraduate Medical Education, Warsaw, Poland

 <https://orcid.org/0000-0001-5461-273X>

Corresponding author:

katarzyna.kosinska-kaczynska@cmkp.edu.pl

Katarzyna Kwiatkowska

Students Scientific Association at the 1st Department of Obstetrics and Gynecology, First Faculty of Medicine, Medical University of Warsaw, Warsaw, Poland

 <https://orcid.org/0000-0002-3404-3557>

Natalia Roman

Students Scientific Association at the 1st Department of Obstetrics and Gynecology, First Faculty of Medicine, Medical University of Warsaw, Warsaw, Poland

 <https://orcid.org/0000-0002-5225-9503>

Julia Wysińska


Students Scientific Association at the 1st Department of Obstetrics and Gynecology, First Faculty of Medicine, Medical University of Warsaw, Warsaw, Poland

 <https://orcid.org/0000-0003-3512-5412>

Iwona Szymusik

1st Department of Obstetrics and Gynecology, First Faculty of Medicine, Medical University of Warsaw, Warsaw, Poland

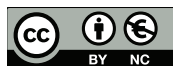
 <https://orcid.org/0000-0001-8106-5428>

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ABSTRACT

Introduction. Fear of childbirth is a specific feeling related to approaching birth that ranges from negligible to very intense. Women's choices and doubts regarding the way of birth may be related to a lack of knowledge about the benefits and advantages of VB or a fear of this method of childbearing.

Aim. The aim of the study was to assess knowledge regarding labour, its possible complications and ways to prepare for vaginal delivery among Polish women

Material and Methods. A cross-sectional study was performed among 4721 women who were pregnant or who had had at least one delivery. A self-composed questionnaire was distributed via the internet in 2018.

Results. It seems that 13.9% of the respondents were pregnant, 49.2% women gave birth vaginally and 30.8% had a caesarean delivery. Most of the respondents were afraid of the pain associated with the labour (75% pregnant women, 63.4% women after vaginal birth, 59.1% women after caesarean section), and 57.8% of respondents would like to avoid episiotomy, but only 27.5% of them used any methods of perineal protection for vaginal delivery. Also, 43.4% of respondents believe that vaginal delivery may have a negative impact on satisfaction in their sexual life, 26% of respondents think that a caesarean section scar has no impact on subsequent pregnancies, and 41% claim that women who had a caesarean delivery feel discriminated against as a caesarean section is considered to be a labour failure in society.

Conclusions. Women's knowledge on the advantages and risks related to the methods of labour is insufficient, which may affect their preferences regarding vaginal or caesarean birth.

Introduction

Fear of childbirth is a specific feeling related to approaching birth that ranges from negligible to very intense. According to Ryding et al., women reporting severe fear are more likely to give birth by caesarean section (CS) (OR 1.66; 95% CI 1.05–2.61). They are also at higher risk of emergency CS and more likely to have an elective CS, mostly due to non-obstetric indications (OR 1.87; 95% CI 1.30–2.69) [1]. While nowadays CS is a safe and life-saving operation, it still carries a 2 to 7-times higher risk of maternal morbidity and mortality than vaginal birth (VB) [2, 3]. Despite those risks, women often request CS without any medical indications, mostly because of the fear of VB. Quinlivan et al. conducted a 2-year audit in a teaching hospital in Australia and found maternal choice to be the most common indication for an elective CS [4]. According to Pevzner et al., 6–15% of women would prefer their baby to be borne by CS [5]. Many authors have concluded that the increasing rate of CS is being largely attributed to maternal request [6–9]. There is no legal option for CS on maternal request in Poland and the Polish Society of Obstetricians and Gynaecologists advises against performing such operations. However, the real rate of CS “on demand” is not reported and not known. Women’s choices and doubts regarding the way of birth may be related to a lack of knowledge about the benefits and advantages of VB or the fear of this method of childbearing.

Aim

The aim of the study is to investigate what Polish women are afraid of in VB and to assess their knowledge regarding the benefits and complications related to this way of birth.

Materials and Methods

A cross-sectional survey was performed. A self-composed questionnaire, composed of 29 questions in the Polish language, was distributed via the internet between November and December 2018, posted on internet forums and Facebook groups for mothers. The participants had to log in before fulfilling the survey, and it was automat-

ically blocked after the last question to minimise the risk of multiple answers from one person. The first part of the questionnaire included sociodemographic data and information on the current or last pregnancy and birth. The second part consisted of questions regarding the knowledge and attitude towards childbirth. Primigravid women who were currently pregnant or those who previously gave birth at least once, but not later than 5 years before, were included in the study. Only completely fulfilled questionnaires were taken into analysis. The reported answers were double-checked by the researchers, and there were no identical records.

The study protocol obtained the approval of the Ethics Committee of the Medical University of Warsaw (no AKBE/126/2018). The committee waived the obligation to gain written or verbal consent to participate in the study as fulfilling the questionnaire was tantamount to giving consent.

Statistical analysis

Data was expressed as absolute numbers and percentages. Statistical analyses were performed using R version 3.2.5 (R Foundation for Statistical Computing, Vienna, Austria), and the χ^2 or Fisher exact tests were used to compare categorical variables. All tests were two tailed and $p < 0.05$ was considered significant.

Results

Characteristics of the study group

It can be seen that 4721 women fulfilled the questionnaire completely: 13.9% of all the respondents were pregnant at the time of survey (656), 49.2% had experienced VB before (2322), 30.8% underwent CS (1454) and 6.1% had previously delivered both vaginally and via CS (289). Also, 2669 women gave birth once and 1396 at least twice. The maternal characteristics of the study group are presented in **Table 1**.

Fear for delivery

The respondents were asked about issues they were concerned about the most regarding vaginal childbirth. Their answers are presented in **Table 2**.

Most of women pointed to pain as the most frightening aspect of vaginal birth (63.4% of them

Table 1. Maternal characteristics of the study group (study group N=4721)

| | N (%) | | | |
|-------------|----------------------------|---|---|-------------------------------------|
| age (years) | ≤ 20 250 (5.3) | 21–30 3135 (66.4) | 31–40 1256 (26.6) | ≥ 41 80 (1.7) |
| education | basic 156 (3.3) | secondary 1657 (35.1) | vocational 278 (5.9) | university education 2630 (55.7) |
| inhabitancy | countryside 1109 (23.5) | cities < 100.000 inhabitants 1582 (33.5) | cities > 100.000 inhabitants 2030 (43) | |

Table 2. Causes of fear for vaginal delivery among Polish women

| Cause of fear | All N=4721 | Pregnant N=656 | After VB N=2322 | After CS N=1454 | After VB and CS N=289 | p |
|-------------------------|----------------|-------------------|--------------------|--------------------|-----------------------------|---|
| | N (%) | N (%) | N (%) | N (%) | N (%) | |
| Pain | 2993 (63.4) | 492 (75) | 1472 (63.4) | 859 (59.1) | 170 (58.8) | 1 vs. 2* 1 vs. 3* 1 vs. 4* 2 vs. 3* |
| VB ending in CS | 2068 (43.8) | 337 (51.3) | 918 (39.6) | 691 (47.5) | 122 (42.2) | 1 vs. 2* 1 vs. 4* 2 vs. 3* |
| Defecation | 1441 (30.5) | 259 (39.5) | 768 (33.1) | 346 (23.8) | 68 (23.5) | 1 vs. 2* 1 vs. 3* 1 vs. 4* 2 vs. 3* 2 vs. 4* |
| Episiotomy | 1767 (37.4) | 375 (57.1) | 779 (33.6) | 536 (36.9) | 77 (26.6) | 1 vs. 2* 1 vs. 3* 1 vs. 4* 3 vs. 4* 2 vs. 3** 2 vs. 4*** |
| Newborn's complications | 2774 (58.8) | 418 (63.7) | 1300 (56) | 908 (62.4) | 148 (51.2) | 1 vs. 2* 1 vs. 4* 2 vs. 3* 2 vs. 4* 3 vs. 4* |

*- p<0.01; **- p=0.04; ***- p=0.02; VB – vaginal birth; CS – caesarean section

responded “yes” or “rather yes” to the question concerning the fear of this aspect). Moreover, pain was the most frightening issue for pregnant respondents, while women who previously gave birth pointed to it significantly less often (75% vs. 63.4% of women after childbirth; p<0.01). The method of the previous birth affected the fear of pain – significantly more women after VB than after CS reported being scared of it (63.4% vs. 59.1%; p<0.01). The women who were afraid of pain less often lived in big cities (42% vs. 44.6%; p=0.01), while their age or education was not related to the answers. Interestingly, childbirth schools' attendance also had no impact on the fear of pain during vaginal birth – 66.9% of women who attended and 68.8% of women who did not attend childbirth schools were mostly afraid

of pain (p=0.1). Interestingly, women who experienced vaginal delivery were afraid less often of pain, infant's complications or episiotomy than women who had cesarean sections or were pregnant (p<0.05).

Labour pain management

As the pain was such an important issue for the respondents, they were asked which methods of pain relief they would prefer to use during VB. The answers are presented in **Table 3**.

It can be seen that 55.5% respondents claimed that VB is more likely to cause neonatal hypoxia than CS. Significantly more women who had a previous CS believed that it is a safer way of birth for a newborn (66% vs. 49% of pregnant women and 51.2% of women after VB; p<0.01).

Table 3. Methods of pain relief during vaginal delivery

| | Respondents N=4721 N (%) | Pregnant N=656 N (%) | After VB N=2322 N (%) | After CS N=1454 N (%) | After VB and CS N=289 N (%) | p |
|----------------------|--------------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------------|--|
| Partner's support | 3099 (65.6) | 441 (67.2) | 1593 (68.6) | 897 (61.7) | 168 (58.1) | 1 vs. 4* 2 vs. 3* 2 vs. 4* 1 vs. 3** |
| Spine massage | 1737 (36.8) | 314 (47.9) | 752 (32.4) | 562 (38.7) | 109 (37.7) | 1 vs. 2* 1 vs. 3* 1 vs. 4* 2 vs. 3* |
| Breathing techniques | 2711 (57.4) | 429 (65.5) | 1361 (58.6) | 758 (52.1) | 163 (56.4) | 1 vs. 2* 1 vs. 3* 2 vs. 3* 2 vs. 4*** |
| Music | 617 (13.1) | 118 (18) | 246 (10.6) | 220 (15.1) | 33 (11.4) | 1 vs. 2* 2 vs. 3* 1 vs. 4*** |
| Screaming | 906 (19.2) | 94 (14.3) | 497 (21.4) | 244 (16.8) | 71 (24.6) | 1 vs. 2* 1 vs. 4* 2 vs. 3* 3 vs. 4* |
| Comfortable position | 2393 (50.7) | 314 (4.9) | 1195 (51.5) | 706 (48.6) | 178 (61.6) | 1 vs. 4* 2 vs. 4* 3 vs. 4* |
| Labour in water | 1536 (32.6) | 302 (46) | 620 (26.7) | 514 (35.4) | 100 (34.6) | 1 vs. 2* 1 vs. 3* 1 vs. 4* 2 vs. 3* |
| Epidural analgesia | 2519 (53.4) | 416 (63.5) | 993 (42.8) | 961 (66) | 149 (51.6) | 1 vs. 2* 2 vs. 3* 1 vs. 4* 3 vs. 4* |
| Other**** | 363 (7.7) | 34 (5.2) | 192 (8.2) | 106 (7.3) | 31 (10.7) | 1 vs. 2* 1 vs. 4* |

* – $p < 0.01$, ** – $p = 0.015$, *** – $p = 0.01$, **** – acupuncture, aromatherapy, TENS electrostimulation, nitrous oxide analgesia, VB – vaginal birth, CS – caesarean section

Episiotomy

It was found that 37.4% of the respondents were afraid of episiotomy during VB (table 2) and 59% of all women would rather to avoid it. Maternal age, education or inhabitance did not influence any kind of decision. Women who attended childbirth schools wanted to avoid episiotomy significantly more often (41.8% of childbirth schools participants and 31.1% of women who did not attend childbirth schools wanted to avoid episiotomy; $p < 0.01$). Regardless of preferences, 74.4% of women who had previously delivered vaginally experienced episiotomy before. However, only 27.6% of respondents who wanted to avoid episiotomy used any kind of techniques of perineal preparation for vaginal birth, while 25.5% massaged the perineal tissue during pregnancy and 2.1% used any medical devices for perineum preparation.

Sexual function after labour

Women were asked if they were afraid of delivery via VB because of its possible consequences in their further sexual lives. Similar rates of respondents believed that it can or cannot have a negative impact on sexual satisfaction (42.4% and 42.9% respectively; $p = 0.2$). Education, place of residence or childbirth schools' attendance did not influence respondents' opinions. Pregnant women believed that vaginal delivery can influence future sexual life (Yes - 42.29% vs No - 37.10%), but respondents who experienced vaginal labour had different opinions, mostly not noticing a difference (Yes - 40.24% vs. No - 52.56%).

Cesarean section scar

Assuming that women choose CS because of fear of VB, they were asked if they believed that

the uterine scar after a previous CS could have an impact on subsequent pregnancies. Only 26% of them believed it did not. Also, 7.3% of women thought that one could not have a VB after a previous single CS. Pregnant respondents more often claimed that it was an absolute contraindication for subsequent VB (15%) than women who had already delivered vaginally (11%; $p < 0.01$) and women who previously had a CS (5.1%; $p = 0.01$).

Sources of knowledge

Concerning the above answers, respondents were asked about the sources of their knowledge regarding labour. Only two thirds of them claimed to gain information from obstetricians during antenatal counselling (65.3%), 54% of respondents were based on their families' or friends' opinions, and almost half of them searched for information regarding birth on internet forums or blogs (48.9% and 48.4% respectively). Also, 43.5% of women learned about pregnancy and birth from books, 37.5% participated in childbirth schools and 38.3% declared that they would do so in a few weeks. However, only 32.5% of women pointed to childbirth classes as their main source of knowledge regarding birth.

Social attitude

An interesting aspect of the study was to investigate if, in women's opinion, society supports choosing CS as a way of delivering a child. Surprisingly, 41% of the respondents claimed that CS is considered to be a failure by society, and women who had a cesarean section might feel discriminated against. The results indicate that 59% of women who had a previous CS, 33% after a previous VB and 28% of pregnant respondents shared that point of view.

Discussion

Almost two thirds of the respondents in the above study indicated pain as the most fearful element of childbirth. Pain during VB was the most frightening for pregnant women; however, more than half of the respondents who already gave birth were also afraid of it. The finding of the above study is in accordance with previously published results. Sioma-Markowska et al. conducted a prospective research among pregnant

women and found a very high level of anxiety related to labour in 6.7% of them. In 85% the anxiety was caused by the fear of pain during VB [10]. According to Eriksson et al., the fear of pain was the most common reason for women to choose an elective CS [11]. In countries with a high rate of CS, the studies indicated the fear of labour pain to be the primary reason for requesting an elective CS [12–16]. According to Yildiz et al., women choose CS as it is considered to be "comfortable and easy" [17]. Dehghani et al. confirmed that fear of labour pain was an independent predictor of choosing an elective CS [18].

As the fear of pain during VB is such an important issue, the analysis of methods of relieving pain chosen by the respondents was conducted. The most important method to manage pain turned out to be the partner's support during birth. Slightly over 50% of women chose breathing techniques, adopting a comfortable position during childbirth or epidural analgesia. As pain is the most frightening aspect of VB for women, it seems essential to propagate knowledge regarding the available methods of managing it. It is possible that broader knowledge of analgesia could decrease the fear of pain among women, especially pregnant ones, and therefore decrease the fear of VB itself. This hypothesis was confirmed by Alakeely et al. in a cross-sectional study among primigravid women. The health education regarding epidural analgesia during antenatal care was an important factor in favour of increasing women's desire to request it during labour [19].

According to the results of the above research, more than half of women were anxious about possible neonatal complications during VB and claimed that CS was a safer option for the newborn. Similar parturients' opinions were reported by several authors. Serçekuş et al. found that "not putting a baby at risk" was the main reason for choosing CS among Turkish pregnant women [14]. Among Iranian primigravidae who requested an elective CS without any medical indications, the fear of infant injury during VB was one of the most frequent reasons [20]. Other researches also indicated that women chose an elective CS because they believed that it was safer for their infants [8,12,14,15, 21–23].

The level of knowledge regarding benefits and risks related to the way of birth among Polish

women is insufficient. Women's knowledge on implications of delivering via CS for subsequent pregnancies and deliveries was investigated in the presented study. Every fourth respondent in the survey believed that a CS uterine scar had no impact on subsequent pregnancies. Although 7.1% of women claimed that having one CS is associated with a necessity for all subsequent deliveries to be cesarean as well, another study also found that one third of women after a previous CS did not agree to a VB trial following gestation [24]. Most women would like to avoid episiotomy during VB, but only one in four used any techniques for perineal preparation during the procedure. All those examples indicate a low level of knowledge regarding natural birth and CS. This may be a consequence of the sources of information on labour chosen by participants of the survey. The most reliable sources, medical staff and childbirth schools, were claimed by 65.3% and 32.5% women respectively. Other women gained information from magazines, relatives, friends and internet forums or blogs. The knowledge gained from unreliable sources leading to wrong conclusions may intensify the fear of VB and influence the rate of CS on demand. According to the presented results, the issues that women are mostly afraid of in VB are generally modifiable. The health education among pregnant women regarding the methods of managing labour pain, increasing the chances of avoiding episiotomy, or the real data on the consequences of having vaginal or cesarean birth could decrease the level of fear of VB.

In our study group, more than a half of respondents had higher education. We assume it is due to the method of recruitment for the study via the internet. Obviously it is not representative of the whole Polish population of women at a reproductive age. According to the Central Statistical Office in 2018, 32.6% of women aged 15–64 had higher education [25].

The strength of the study is its uniquely large group of respondents of childbearing age. The anonymity and distribution of the questionnaire via the internet may promote honesty in the answers. To our knowledge, no other research in such a large group of pregnant woman in Poland has been conducted and published to date. This unique analysis of causes of fear of VB in a Polish population of women identifies key point, in

which spreading reliable information may have a crucial impact on women's choices regarding vaginal or cesarean birth. However, there are some limitations to the study. The analysed data is derived from a self-composed questionnaire, which could be the cause of an inherent bias. It was distributed online; therefore, the sample may be biased, as only those who could respond to an online survey could participate. The question of the reliability of the results is a valid concern.

Conclusions

In conclusion, women's knowledge regarding the advantages and risks related to methods of labour is insufficient, which may affect their preferences regarding vaginal or cesarean birth. Most of the fearful issues of vaginal birth can be managed by medical staff throughout sharing knowledge on parturition. The presented study emphasises the need for raising awareness regarding birth among Polish women.

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Conflict of interest statement

The authors declare no conflict of interest.

Data availability statement

The data that support the findings of this study is available from the corresponding author upon reasonable request.

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