Original Article Pol J Public Health, Vol. 135 (2025): 30-34

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Quality of care for pregnant and postpartum women in randomly selected hospitals in Poland

Abstract

Aim. The purpose of the study was to determine the degree of satisfaction of women giving birth in hospitals in Poland with the quality of perinatal care. Factors such as choice of hospital, possibility of obtaining an epidural, participation of people accompanying women during labor and others were taken into account. The study examined how complications and procedures (such as perineal incision) affected women's satisfaction with perinatal care.

Material and methods. The survey was conducted online among patients giving birth in facilities across Poland, both public and private. Participation in the survey was offered to a random sample of 309 women who gave birth between 2014 and 2024. A self-administered questionnaire, consisting of closed and open-ended questions, was used for evaluation.

Results. The perinatal care was rated positively by 70.8% of the women surveyed. Among the Polish women surveyed, only 8.3% rated the level of care as bad and 2.1% as very poor . Most respondents gave birth in public hospitals, and only a small percentage in private hospitals (3.2%), so the conclusions drawn in this study apply mainly to public facilities.

Conclusions. The most significant factors in assessing the satisfaction of mothers with the standard of care were the attitude of medical personnel toward patients and the lack of availability of epidural anaesthesia for labor. The quality of perinatal care in Polish hospitals seems satisfactory for most patients, but some issues still need improvement. Care of the pregnant woman should be multilevel and include both physical and psychological aspects, for the overall well-being of mother and child.

Keywords: perinatal care, obstetrics, parturition, quality of health care.

DOI: 10.12923/2083-4829/2025-0007

INTRODUCTION

Subjective feelings have a significant impact on decision-making in every aspect. From questions about whether to get pregnant and how to choose the right doctor and hospital. Health care in Poland provides care for pregnant and postpartum women at every stage of pregnancy, patients have access to consultations with doctors, nurses and obstetricians. Obstetric care does not require a referral from a primary care physician (PCP), so access to obstetricians is facilitated. Women can also benefit from specialised assistance in the emergency room, if a situation that requires immediate diagnosis and treatment occurs. It would seem that every patient always has access to help. However, the question should be asked whether this assistance is sufficient and whether all the expectations of patients are being met. The period of pregnancy, childbirth and postpartum is a time when a woman should be under frequent medical control. Doctors and midwives accompany her from the first visits of pregnancy to the postpartum period. Due to the frequency of all kinds of medical procedures, mothers-to-be have the right to have expectations and their own opinions, and the desire to know their opinions gave rise to a survey assessing the quality of care for pregnant women over the past ten years.

AIM

The purpose of the study was to determine the degree of satisfaction of women giving birth in hospitals in Poland with the quality of perinatal care. Factors such as choice of hospital, possibility of obtaining an epidural anaesthetic, participation of people accompanying women during labor and others were taken into account. The study examined how complications and procedures,such as the perineal incision, affected women's satisfaction with perinatal care.

MATERIAL AND METHODS

In order to obtain patients' opinions, a questionnaire consisting of 31 questions was used. The survey was divided into three parts; The first consisted of general data, such as place of residence, age, education and the number of births.

The second part of the questionnaire focused on detailed questions about the course of the birth itself. This part consisted of 19 questions, 18 of which were closed questions and 1 open question requiring a short answer.

The third part of the questionnaire focused on collecting data on patients' subjective feelings about the quality of perinatal care. It contained 8 questions, 7 of which were closed-ended, and one of which was an open-ended question requiring a short answer.

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The study involved a group of 309 women who gave birth between 2014 and 2024. Of the 309 subjects, 2 patients (0.6% of all) were under 20 years of age at the time of childbirth, 145 (46.9%) were women aged 20-30, 155 (50.2%) were women aged 30-40, and only 7 women (2.3%) gave birth after the age of 40. In the group of respondents, the majority of them were women who gave birth to 2 or more children (54.7%).

RESULTS

The choice of a hospital

In the study group, 29.6% of surveyed women gave birth in a university hospital, 33.8% gave birth in a provincial hospital, 36% in a district hospital, and 3.2% in a private hospital. 30.8% of women chose the hospital for childbirth because of the gynaecologist working there or the midwife responsible for managing the pregnancy. Exactly, 22.7% of women justified their choice by the proximity to their place of residence, and 28% were guided by good opinions from other women giving birth there, posted on the Internet or heard from friends. Thereinafter, 3.2% of the study participants chose to give birth in a hospital of their choice due to the availability of epidural anaesthesia for delivery. The remaining answers included the desire to ensure the possibility of an informed choice between caesarean section and natural birth, the place of work of a family member (e.g. mother), a good neonatology department in the hospital or its close vicinity and the presence of appropriately trained staff and equipment by the hospital to save the life of the newborn in the event of life-threatening perinatal complications, the third degree of hospital referral in high-risk pregnant women and the case of premature births. Some women reported being unable to be admitted to the hospital of the first choice due to lack of space or a positive COVID test result.

In the presented study, 100% of participating women were under the care of an obstetrician throughout their pregnancy, while 46.1% of pregnant women received additional care from a midwife during their pregnancy. A birth plan was prepared by 51.9% of women before admission to the hospital. According to the data 55.5% of women had natural births, and in 1.6% of natural deliveries a surgical delivery was necessary due to complications. Caesarean sections underwent 44.5% of women, od which 65% for obstetric indications, and 35% for non-obstetric reasons involving maternal conditions (e.g., ophthalmological, cardiac, pulmonary diseases) or psychiatric reasons such as fear of childbirth (tocophobia).

Complications

Out of the 309 respondents, 100 (32.4%) had experienced complications, which can be divided into 2 groups: obstetric and non-obstetric. Respondents reported complications in the question according to their knowledge. The first group includes bleeding during pregnancy and labor, among others. Respondents also frequently reported complications related to anatomical causes, such as birth incommensurability. Birth incommensurability is defined as a disproportion between the size of the fetal head and the size of the pelvic inlet plane.

This group of complications can also include perinatal haemorrhage, cesarean scar dissection, perineal or anal canal rupture, cesarean scar infection or PROM syndrome (premature amniotic fluid drainage). Of all the responses collected, perinatal haemorrhages were the most frequently reported complication by respondents.

The last group, i.e., complications unrelated to pregnancy itself and childbirth, included gestational diabetes, hypertension, hypothyroidism, neuralgia or infections such as influenza or COVID-19. Among this group of complications, gestational diabetes was the most common, which is consistent with population data [1]; gestational diabetes affected up to a dozen percent of the population of pregnant women in Poland.

Possibility of obtaining epidural anaesthesia

Epidural anaesthesia should be available to a woman in labor upon her request. Among the respondents, 34.9% of the women opted for epidural anaesthesia after a discussion with the obstetrician. Only 8.4% of respondents did not agree to an epidural. An epidural was not offered to 39.2% of respondents. The survey did not include a question about the reasons for the lack of epidural anaesthesia, so it is impossible to say whether this fact was due to contraindications or lack of availability of anaesthesia. It should be noted that contraindications to regional epidural anaesthesia are primarily blood clotting disorders, reduced circulating blood volume, shock, infection at the site of administration, and sepsis. Among women who had an epidural, 34% of them gave birth in county hospitals, 31.13% in provincial hospitals, 30.19% in university hospitals and 6.6% in private hospitals.

The highest percentage of birthing women who were offered an epidural, relative to the entire group in a given hospital, was in private hospitals (70%), and the lowest in provincial hospitals (31.73%).

These values in university and county hospitals were 38.56% and 32.14%, respectively. However, the exceptionally high percentage in private hospitals was not statistically significant, because the number of women who gave birth in a private hospital was only 10 patients, which is 3.24% of the total study group, so it was not a representative group. Among the other hospitals, the values were similar, so it can be assumed that there were no significant differences in the availability of epidural anaesthesia between different types of facilities.

Participation of relatives and students in childbirth

The majority of respondent women (58.3%) were accompanied by the child's father during childbirth. Exactly, 2.3% of the women were accompanied by a close person other than the child's father, 0.6% of the respondents were accompanied by a sibling, and 0.3% of the women indicated being accompanied by a parent. Among participants 38.5% of women gave birth without companions.

As for the presence of medical students during childbirth, 73.1% of women denied their presence. Students were present at the birth of 17.8% of women, of which only 12.3% of patients gave informed consent. According to the data , 9.1% of women did not know whether students were present during their deliveries.

The largest number of students accompanied patients during child deliveries at university hospitals – as many as 47.27% of the cases. University hospitals also had the highest number of cases in which students were present during childbirth despite the patient's lack of consent - this was true in as many as 44.44% of all cases in which students were present during childbirth at university hospitals. The smallest percentage of students was recorded in private hospitals – only 1.81%. In

provincial and district hospitals, the values were; 32.73% and 18.18%, respectively.

Factors of the labour and postpartum period affecting the course and impressions of childbirth

Labour was induced in 31.7% of respondents, who qualified for provocation of labour. Exactly, 50.6% of women giving birth vaginally had a perineal incision, but 40% of them did not consent to it. Among women giving birth by natural means 54% were allowed to choose the position for delivery, and 75% of women were provided skin-to-skin contact between the baby and the mother after birth. Of the remaining 25% of patients, 6.5% did not have this option due to the baby's condition. Also, 75% of mothers had access to the advice of a lactation consultant, which 65.4% of women took advantage of. ⅓ were dissatisfied with this advice.

Level of satisfaction with perinatal care

There were 78% of the patients, who were satisfied with the respect and attention to privacy shown by the hospital staff, and 81% got answers from the medical staff to all their questions about pregnancy, labour, postpartum or the baby. During delivery in the hospital, 57.5% of the respondents felt that they had a sense of influence over decisions made about the course of labour and care. However, 24% of women reported a feeling of lack of influence over the decisions of doctors and midwives, and 5.2% of women reported a definite lack of influence and dissatisfaction with a sense of helplessness. 28.9% of women rated their satisfaction with the course of labour and perinatal care in hospital wards as very good. In addition, 41.9% of women rated their level of satisfaction as good, and 21.1% reported a moderate level of satisfaction with their hospital stay, while 5.8% of women participating in the survey were dissatisfied, and 2.3% were very dissatisfied with the care provided by hospital staff. The main reasons cited by women describing their level of satisfaction as bad or very bad were staff's harshness and routine treatment of patients, lack of postpartum support in caring for the newborn and breastfeeding, errors in medical records, overcrowded hospital rooms and unsatisfactory postpartum nutrition.

A sizable number of respondents felt ignored by the staff, reported a lack of answers to questions asked about the health of the mother or the care of the newborn, a lack of information about the health of the newborn and the examinations performed, outdated recommendations and sometimes a lack of medical attention to postpartum ailments such as anaemia, vomiting and dizziness. Women also reported dissatisfaction with painful examinations conducted without the patient's consent, and a sense of privacy taken away due to too many students present at the birth. Another reason for dissatisfaction was the delay in the administration of epidurals until it was no longer possible or the lack of availability of anaesthesia. The lack of choice of position for delivery and the inability to use the toilet or eat a meal did not positively affect women's satisfaction during labour. Another reason for lowering the comfort of women was the lack of the possibility of family childbirth or even preventing telephone contact with the partner and refusal to provide information about their condition.

DISCUSSION

Epidural anaesthesia and the quality of obstetric care

The results of our survey showed that some women choose to use epidural anaesthesia, which is now considered the most effective method of labor analgesia and is the gold standard [2]. In addition, medical developments have made epidurals a safe procedure [3]. While the epidural anaesthesia guarantees the elimination of some of the pain during labour, it is not the only analgesia option chosen by patients. Some patients show apprehension about the use of epidural anaesthesia, mainly due to fear of complications. For this reason, up to half of patients do not opt for epidurals [4]. At the same time, patients would choose epidurals more often if they were promoted more by pregnancy doctors and midwives [4]. Most patients gain their knowledge about epidurals from the Internet [5], which contributes to the spread of false information. Greater patient knowledge about this anaesthesia and the debunking of myths that have been created around it could contribute to the growing popularity of epidurals. As the results of the survey showed, the majority of women who had the option of epidural anaesthesia used it, which shows that patients are eager to use this option for labour pain analgesia. The degree of patient satisfaction with epidural analgesia, according to studies by other authors, is also high [6].

Impact of the presence of relatives and students on patients' satisfaction with childbirth and perinatal care

One of the reasons for the surveyed women's dissatisfaction with childbirth and perinatal care, which they reported in the survey, was the lack of the possibility of a family delivery or telephone contact with a partner. This shows that at least some women require support from loved ones during childbirth, usually the baby's father. The results of the survey indicated that the vast majority of women had a companion during labour with only 38.5% of patients gave birth without the company of a person of choice.

Most women giving birth perceived the presence of men during childbirth positively [7]. The COVID-19 pandemic significantly reduced the possibility of family births, so during the pandemic period, women tended to give birth without companions, but studies have not shown that this situation increased anxiety and stress levels in expecting mothers [8]. At the same time, most women would not choose to give birth again without the company of a loved one [8], which shows the importance of psychological and emotional support during childbirth. During the birth, a woman can be accompanied not only by the father of the child but also by a close female companion. Studies have shown that female companionship also has a positive effect on the overall course of labour and can provide significant emotional support [9].

According to the survey, the largest number of students were present during childbirth at university hospitals. The presence of medical students during childbirth is an essential part of their education. This allows them to expand their knowledge and skills. Most students rate such an opportunity for clinical learning as necessary and rewarding [10].

As for the attitudes of birthing women toward the presence of students during childbirth, opinions are divided. Some studies have shown that the presence of medical students does not cause a significant decrease in women's satisfaction with

the labour process [11]. In contrast, the results of other studies show that women further resent the presence of medical students during labour and postpartum [12]. In addition, most women agreed to the presence of an obstetrics student rather than a medical student, and this difference is also present when it comes to performing a physical examination bymedical students [12].

In the survey, 5.8% of women rated their satisfaction with perinatal care as ‘’poor’ and 2.3% as „very bad”. In these cases, students were present at 22% of deliveries of women describing the level of satisfaction as „bad” and at 14.3% of deliveries of women describing the level of satisfaction as ”very bad”.

The presence of medical students of various disciplines in delivery rooms at university hospitals is common. It is important to keep in mind that patients may not consent to the student participation, as the mental and physical comfort of patients should always come first.

Patient’s expectations of childbirth

A birth plan was provided by 51.8% of the surveyed women,which included their expectations and perceptions about hospital care and procedures carried out by the medical staff. The expectations regarding childbirth were not fulfilled in as many as 19.7% of all women This was also noted in another publication [13], the results of which testified that all expectations about the birth plan were met in only 9% of women, 75% of the points were met in 36% and 50% in 39% of patients. This left 16% of women whose preferences included in the birth plan were not respected. As noted in the study in question, the course of labour is not easy to predict, and emergencies often require rapid decision-making with the safety of the mother and the baby in mind above all, so that the expectations included in the birth plan must be adapted to the circumstances. Of course, changes in the birth plan should be discussed with the patient. Thus, results of our study suggest that women may be too attached to the created birth plan and treat it as the only strict option for the course of the child’s birth.

Episiotomy

Three situations can occur during labour: tissues will not be damaged, and tissues will rupture spontaneously (grades I-IV: I – rupture of the skin and vagina, II – rupture of the muscles of the pelvic floor, perineum and vagina, III – rupture involving the external anal sphincter, IV – rupture involving the rectal mucosa) or they will be incised (corresponds to grade II rupture). Opinions on episiotomy vary. The Birth to Humanity Foundation 2010 issued a publication that presented several scientific studies denying the validity of perineal incision during physiological labour and denying the claim that it is a procedure that protects the reproductive tract. In the 2000s, data from about 40% of Polish hospitals said that 50% of women had their perineum incised. However, in the 2006 „Rodzić po ludzku” (eng. „Give birth humanely”) campaign, as many as 80% of respondents reported having had a perineal incision, and ⅔ were not asked for consent [14]. In the survey, about half of women giving birth by natural means had undergone the episiotomy, many of whom did not explicitly consent to the procedure. In an analysis of perineal incisions and injuries in 2018 parturients, as many as 71.43% of respondents (women giving birth for the first time) had an episiotomy [15]. World Health Organization (WHO) does not recommend this procedure [16], already in 1997 considering that the number of episiotomies should not exceed 20% [17].

Skin-to-skin contact

Although there is no clear definition of what specifically kangarooing is [18], we can define it as skin-to-skin contact, otherwise known as kangarooing, which is the placement of the baby on the mother’s chest (or other person) as soon as possible after birth. The first direct physical contact has a positive effect on maintaining the baby’s thermal comfort, calming the baby (observed lowering of the baby’s heart rate), speeding up meconium output [19], reducing the length of hospitalisation, and even reducing the risk of hypoglycemia [20]. Skin-to-skin contact has been proven to increase the likelihood of success of first breastfeeding [21]. Although the goal is to bring the baby into contact with the mother (parent) as soon as possible, a study from 2022 showed no significant difference in breastfeeding, i.e., a reduction in lactation difficulties [22]. A study from 2023 also found no negative effect of kangarooing on babies born prematurely (28-31+6 t.c., weight >1000 g) [23]. As many as 25% of the women participating in the survey could not kangaroo their baby immediately after birth due to the condition of the newborn. Given the positive effects of skin-to-skin contact on mother and child, this practice should be approached with greater care. All medical examinations and procedures should be performed with the baby lying on the mother’s body if their health permits.

The presence of a lactation consultant in the ward

In 2018, a nationwide survey of 3,000 women was conducted on their lactation knowledge and the midwife’s role in preparing new mothers for breastfeeding. Although the survey focused on the care of the family midwife, it provides some insight into young mothers’ preparation for breastfeeding, which often causes problems, especially for first-time mothers. There is also a common misconception among mothers that they have insufficient breast milk, leading to the inclusion of modified milk in the diet and premature cessation of breastfeeding. While the vast majority of respondents received either comprehensive and useful or insufficient but useful information on breastfeeding, the most common cause of problems related to the mother’s person was poor technique, while the main topic of home visits was the advantages of natural feeding.

Respondents expressed the opinion that a greater focus on baby feeding techniques would increase the desire and success of breastfeeding. [24].

Thus, it is easy to conclude that the presence of appropriately qualified personnel has a positive impact on the initiation and progress of lactation. However, 25% of the respondents did not have the opportunity to use a lactation counsellor, i.e. a person who has been properly trained in the subject of lactation. The report tells how important it is for a young mother to be properly instructed about breastfeeding, especially the technique and physiology of the process. Thus, we can conclude that the presence of a lactation consultant in the ward should increase the percentage of breastfeeding mothers and increase the duration of breastfeeding the baby, as well as reduce the frequency of inclusion of additional products in the diet of the newborn by WHO recommendations [25].

CONCLUSIONS

It is extremely important to continually improve the standards of perinatal care to ensure greater comfort and safety for future mothers. Promoting the management of pregnancy and childbirth with respect for the physical and psychological needs of the pregnant woman is very important to preserve childbirth as a positive experience for the woman. Raising awareness among both women and health care professionals about the importance of accessibility to anesthesia, contact between mother and newborn, and the presence of a lactation consultant in the maternity ward can significantly improve the quality of medical services related to pregnancy and childbirth.

REFERENCES

1. Salmanowicz M, Nowicka P, Banach B, Kukowka A. Diagnosis and therapy of gestational diabetes. Farm Pol. 2022;78(5):283-92.
2. Halliday L, Nelson SM, Kearns RJ. Epidural analgesia in labor: A narrative review. Int J Gynecol Obstet. 2022;159(2):356-64.
3. Radkowski P, Podhorodecka K, Mirkowicz P. Historia znieczulenia zewnątrzoponowego – położnictwo. Anest Ratown. 2023;17(1):56-60.
4. Wolska W. Znieczulenie zewnątrzoponowe porodu w opinii pacjentek i personelu medycznego. Kraków: Uniwersytet Jagielloński; 2011. [https://ruj.uj.edu.pl/entities/publication/c82676ae-1d98-4c3b-b8c9-6c358f95e2fb]
5. Wąsik S. Wpływ znieczulenia zewnątrzoponowego na przebieg porodu w opinii pacjentek. Kraków: Uniwersytet Jagielloński; 2017. [https://ruj.uj.edu.pl/entities/publication/49aa084d-2015-4453-a61d-b67ec6ccd3a9]
6. Dziób A. Dostępność znieczulenia zewnątrzoponowego do porodu siłami natury - opinia kobiet. Kraków: Uniwersytet Jagielloński; 2017. [https://ruj.uj.edu.pl/entities/publication/865fe1ec-f49f-417d-8cac-3f76aa516bd3]
7. Delimat A. Sposób postrzegania obecności mężczyzn podczas porodu przez kobietę ciężarną. Kraków: Uniwersytet Jagielloński; 2018. [https://ruj.uj.edu.pl/entities/publication/7534d9b9-3573-4d27-b4ac-dc99cfebad11]
8. Skowron Ż. Poziom stresu rodzącej spowodowany brakiem osoby towarzyszącej podczas porodu w okresie pandemii. Kraków: Uniwersytet Jagielloński; 2020. [https://ruj.uj.edu.pl/entities/publication/1126937a-531e-4ac5-a561-a9b9d89a33e1]
9. Madi BC, Sandall J, Bennett R, MacLeod C. Effects of female relative support in labor: A randomized controlled trial. Birth. 1999;26(1):4-8.
10. Shakartzi H, Wenren L, Fernandes S, et al. DREAM: Empowering preclinical medical students with labor support. MedEdPORTAL; 2018.
11. Malhotra T, Thomas S, Arora KS. Impact of medical students on patient satisfaction of pregnant women in labor and delivery triage. Matern Child Health J. 2019;23(11):1467-72;.
12. Woolner A, Cruickshank M. What do pregnant women think of student training? Clin Teach. 2015;12(5):325-30.
13. Romańska A, Baranowska B, Sys D, Węgrzyn P. Wybrane zagadnienia z planu porodu w kontekście oczekiwań kobiet i ich wyników okołoporodowych. Hygeia Public Health. 2019;54(2):123-9.
14. Kubicka-Kraszyńska U, Otffinowska A, Siemińska A, et al. Nacięcie krocza – konieczność czy rutyna? Fundacja Rodzić Po Ludzku. Warszawa; 2010. [https://rodzicpoludzku.pl/wp-content/uploads/2008/10/naciecie_koniecznosc_czy_rutyna2010-1.pdf.]
15. Ćwiek D, Kurkus D, Szymoniak K, et al. Analiza nacięć i obrażeń krocza u rodzących. Pol Przegl Nauk Zdrowiu. 2018;1(54):21-32.
16. WHO recommendations. Intrapartum care for a positive childbirth experience. Geneva; 2018.
17. Care in normal birth: a practical guide. Technical Working Group. World Health Organization. Birth (Berkeley, Calif). 1997;24(2):121-3.
18. Chan GJ, Valsangkar B, Kajeepeta S, et al. What is kangaroo mother care? Systematic review of the literature. J Global Health. 2016;6(1).
19. Bajek A, Marcinkowski TJ, Rzempowska J, et al Kangurowanie – zalecany pierwszy bezpośredni kontakt ciała noworodka z ciałem matki. Hygeia Public Health. 2014;49(3):417-20.
20. Lord LG, Harding JE, Crowther CA, et al. Skin-to-skin contact for the prevention of neonatal hypoglycaemia: a systematic review and meta-analysis. BMC Pregnancy Childbirth. 2023;23(1):744.
21. Karimi FZ, Sadeghi R, Maleki-Saghooni N, et al. The effect of mother-infant skin to skin contact on success and duration of first breastfeeding: A systematic review and meta-analysis. Taiwan J Obstet Gynecol. 2019;58(1):1-9.
22. Agudelo SI, Gamboa OA, Acuña E, et al. Randomized clinical trial of the effect of the onset time of skin-to-skin contact at birth, immediate compared to early, on the duration of breastfeeding in full term newborns. Int Breastfeed J. 2021;16(1):33.
23. Kristoffersen L, Bergseng H, Engesland H, et al. Skin-to-skin contact in the delivery room for very preterm infants: a randomised clinical trial. BMJ Paediatr Open. 2023;7(1):e001831.
24. Iwanowicz-Palus G, Bogusz R. Opinie młodych matek na temat laktacji i roli położnej w promowaniu karmienia piersią. Raport z badań 2018. [https://oipip.opole.pl/wp-content/uploads/2019/06/aktualnosci_raport_badanie_opinii_mlodych_matek_na_temat_laktacji.pdf]
25. Breastfeeding. WHO; 2018. [https://www.who.int/news-room/facts-in-pictures/detail/breastfeeding]

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