

# WOMEN'S EXPECTATIONS AND PREFERENCES FOR CARE OF THE NEWBORN IN THE IMMEDIATE POSTPARTUM PERIOD

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**A** – study design, **B** – data collection, **C** – statistical analysis, **D** – interpretation of data, **E** – manuscript preparation, **F** – literature review, **G** – sourcing of funding

## ABSTRACT

**Background:** The Regulation of the Minister of Health issued on 16th August 2018 addressed the matter of the organizational standard of perinatal care which determines guidelines concerning care of the newborn baby, in which skin-to-skin contact and early breastfeeding are important.

**Aim of the study:** The aim of this study is to explore women's preferences concerning care of the newborn in the immediate postpartum period.

**Material and methods:** 130 patients attending the Pro-Familia specialist hospital in Rzeszow participated in this research. The cohort consisted of pregnant women who had attended the doctor supervising their pregnancy before delivery. The research was carried out from March to April 2013 and the data collected was statistically analyzed, assuming a significance level of  $p < 0.05$ .

**Results:** Pregnant women most often expressed a preference of an accompanying person to cut the newborn's umbilical cord (59.2%), with 23.1% preferring a member of the medical team to do so. The majority (89.2%) of pregnant women wanted their baby to be laid on their stomach immediately following delivery to ensure skin-to-skin contact. In terms of Apgar scoring, 69.2% of women expected information about the Apgar score of their newborn immediately after delivery. Most women (60%) wished their newborn to be given routine vaccinations for hepatitis B and tuberculosis (BCG). Patients most often declare that they want to breastfeed exclusively (77.7%), with 29.2% of women expressing a wish to obtain more information about breastfeeding and 31.5% wishing to consult with a lactation specialist.

**Conclusions:** Pregnant women expect skin-to-skin contact immediately after delivery, the umbilical cord to be cut by an accompanying person and would like to be told their newborn's Apgar score. The women studied prefer exclusively breastfeeding, and express a wish to obtain information regarding lactation, and expect to be able to consult with a lactation specialist.

**KEYWORDS:** perinatal care, expectations, midwife, standard

## BACKGROUND

A dozen or so years ago, a baby was most often born not on the mother's abdomen but on the delivery bed and was taken to the neonatal ward immediately after delivery. This was explained by the need for the postnatal mother and baby to rest following delivery, as well as the "warming up" and observation of the neo-

nate. The mother could see her newborn baby only after a few hours [1]. In recent times, a new concept of perinatal care has appeared, taking into consideration the preferences of the mother and her family, which has enabled changes in perinatal care and care of the newborn baby [2]. The Regulation of the Minister of Health issued on August 16th 2018 guaranteed these

changes in the organizational standard of perinatal care, which determines guidelines for care of the newborn baby, in which skin-to-skin contact and early start of the first breastfeeding is emphasized [3]. The introduction of this new standard of perinatal care serves to improve the quality of services in the field of perinatal care. Formalizing the standard of care into the form of a legal act is expected to affect women's decisions concerning medical care [4].

In perinatal care now, great emphasis is placed on early physical contact between a mother and the newborn baby. This is achieved by placing the newborn on the mother's abdomen immediately following delivery. In the two hours following delivery, breastfeeding is encouraged to begin whenever possible. The assessment of the newborn baby and the anthropometric measurements are only made two hours after birth. The body-to-body contact should be stopped only if the health of a mother or a baby is threatened [1,3]. Close contact between a mother and a baby, especially during initial period, has an extremely beneficial effect influencing the acceptance of the newborn baby by the mother, regulation of the newborn's physiology and the strengthening of mutual bonds. This close contact also has a hormonal benefit, in stimulating the release of oxytocin. Oxytocin acts to stimulate lactation, reduce the risk of postpartum hemorrhage, reduce maternal stress levels and helps to regulate the temperature of the newborn [1,2]. Research shows that women who hold a baby right after birth in their arms, show less fear, greater faith in their own strengths, and greater ability to independently care for her newborn baby on the third day after delivery, when compared with mothers who were separated from their newborn following delivery [5].

## AIM OF THE STUDY

The aim of the study is to explore women's preferences regarding care of the newborn baby following delivery.

## MATERIAL AND METHODS

### Study design

The study was conducted among pregnant women in March and April 2013. The consent of the local bioethics commission was obtained for conducting the research. All respondents were informed about the subject of the study, the aim and the possibility of resigning from the study. Also, they were assured of preserving their complete anonymity.

### Participants

The study cohort comprises 130 qualifying patients who returned completed questionnaires. The study included pregnant women who attended the antenatal clinic of the Pro-Familia Specialist Hospital in Rzeszow

before delivery and met the following inclusion criteria: study area (city), pregnant patients who expected a short delivery, had their own ideas for delivery and prepared for it. The exclusion criteria consisted of: study area (village), non-pregnant patients.

### Data sources/measurement

In this study the research tool used was a survey constructed on the basis of available literature on the subject. The survey was divided into three parts: formal and organizational, basic (questions of various nature) and the medical record. The survey used closed, semi-open and open-ended questions to acquire information on women's preferences for newborn care.

### Statistical analyses

To study the relationship between variables the V Cramer and Phi tests were used to analyze questions on nominal scales. The chi-square test was used to check the existence of correlations in the entire research population. For questions on ordinal scales, Kendall Tb and Kendall Tc tests were used [6]. Calculations were made with the use of SPSS Statistics 20, assuming a significance level of  $p < 0.05$ . Chi-square test of independence, t test for independent variables and one-way analysis of variance (ANOVA) and Tukey's post-hoc test were carried out [7].

## RESULTS

### Characteristics of the study group

The average age of women surveyed was 27.7 +/- 1. They were predominantly married women (76.2%), 37.0% resided in a big city and the cohort studied generally had achieved higher education. Most women surveyed (53.1%) were currently in their first pregnancy (Tab. 1).

Table 1. Characteristics of the research group.

Maternal age	≤ 24	25 - 35	> 35		
	(N= 37) 28.5%	(N= 86) 66.2%	(N= 7) 5.4%		
Place of residence	City < 50,000 residents	City > 50,000 residents	Countryside		
	(N= 40) 30.8%	(N= 49) 37.7%	(N= 41) 31.5%		
Education	Basic vocational education	Secondary level of education	Undergraduate education	Tertiary education	
	(N = 2) 1.5%	(N= 29) 22.3%	(N= 25) 19.2%	(N= 74) 56.9%	
Marital status	Married	Unmarried	Co-habiting		
	(N= 99) 76.2%	(N= 17) 13.1%	(N= 14) 10.8%		
Number of pregnancies	0	1	2	3	4
	(N= 69) 53.1%	(N= 40) 30.8%	(N= 14) 10.8%	(N= 5) 3.8%	(N= 2) 1.5%

### Main results

Women generally prefer immediate skin-to-skin contact, with 89.2% (n=116) of women preferring the

newborn to be laid on her stomach after delivery to ensure this early physical contact. When asked about preferences regarding the cutting of the umbilical cord, women most often indicated a preference for the umbilical cord to be cut by an accompanying person (59.2%, n=77), while 23.1% (n=30) would like this performed by a member of medical staff, and 2.3% (n=3) would like to cut the umbilical cord themselves (Tab. 2). One sixth of women; (15.4%, n=20) would like to cut the umbilical cord only after its pulsation has ceased.

Table 2. Maternal preferences regarding the umbilical cord.

Maternal preferences	N	Percentage
To be cut only after pulsation ceased	20	15.4
For the umbilical cord to be cut by an accompanying person	77	59.2
For the umbilical cord to be cut by myself	3	2.3
For the umbilical cord to be cut by medical staff	30	23.1

In terms of the newborn's Apgar score; 69.2% of women expressed a preference to be told their baby's Apgar score. Most women (60%, n=78) would like their newborn to receive hepatitis B and BCG vaccinations, and 26.2% (n=34) expressed a preference to feed their baby prior to any vaccinations (Tab. 3).

Women most often wish to breastfeed exclusively (77.7%, n=101), 29.2% (n=38) would like to obtain more information about breastfeeding and 31.5% (n=41) expect a consultation with a lactation specialist. Only 4.6% of women (n=6) plan to exclusively bottle feed (Tab. 4).

There is statistical significance between maternal age and desire to be informed if bottle feeding is necessary ( $p=0.008$ ). There is also statistical significance between parity and preference to obtain more information regarding breastfeeding, with primiparous women being more likely to wish information regarding breastfeeding than parous women. Taking into consideration their education, no statistically significant relationship is found ( $p>0.05$ ) (Tab. 5).

Table 3. Maternal preferences of medical staff following delivery.

Maternal preferences	N	Percent
To have the newborn placed on my stomach "skin to skin" contact	116	89.2%
To be informed about the baby's gender and time of birth before cutting the umbilical cord	75	57.7%
I would like my accompanying person to be present during measurements and the first examination of a baby	66	50.8%
I would like to be informed of my baby's Apgar score	90	69.2%
I would like to feed my baby before any planned vaccinations (about 30 min.)	34	26.2%
While I recovery I would like to have my baby with me at all times	46	35.4%
I would like my baby to be in an adaptable room for newborns	2	1.5%
I would like my baby to be in a neonatal room only at night	7	5.4%
I would like to be given medication to provoke contractions to facilitate delivery of the placenta	16	12.3%
I would like to deliver the placenta without being given medication to provoke contractions	26	20.0%
I would like to be informed about the baby's examinations and any preventive activities	71	54.6%
I do not want my baby to be provided with HBV and BCG vaccinations	1	0.8%
I want my baby to be provided with HBV and BCG vaccinations	78	60.0%
I want my baby to be washed during the first day following delivery	14	10.8%
I want my baby to be examined before going home in an adaptable room	60	46.2%
I do not want my baby to be examined before going home in an adaptable room	1	0.8%
I want any procedures with the baby to be done in my or my partner's presence	60	46.2%

Table 4. Maternal preferences regarding feeding.

Maternal preferences	N	Percentage
To breast-feed exclusively	101	77.7%
I do not want my baby to be bottle fed in any way	18	13.8%
Please inform me if bottle feeding is necessary	25	19.2%
I do not want my baby to be given a dummy	17	13.1%
I would like to obtain more information about breastfeeding	38	29.2%
I would like to consult with a lactation specialist	41	31.5%
I plan to bottle feed exclusively	6	4.6%

Table 5. Correlations between age, parity, and preferences in terms of feeding a baby.

		Age						Number of deliveries							
		≤ 24		25 - 35		> 35		0		1		2		3+	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
To breast-feed exclusively	yes	25	67.6	70	81.4	6	85.7	56	74.7	33	80.5	10	83.3	2	100.0
	p	p>0.05						p>0.05							
To not bottle feed	yes	4	10.8	14	16.3	0	0.0	11	14.7	5	12.2	2	16.7	0	0.0
	p	p>0.05						p>0.05							
To be informed if bottle feeding is necessary	yes	13	35.1	10	11.6	2	28.6	17	22.7	6	14.6	0	0.0	2	100.0
	p	.008*						.006*							
To not give a dummy	yes	6	16.2	10	11.6	1	14.3	11	14.7	3	7.3	2	16.7	1	50.0
	p	p>0.05						p>0.05							
To obtain more information concerning feeding	yes	9	24.3	29	33.7	0	0.0	30	40.0	6	14.6	2	16.7	0	0.0
	p	p>0.05						.017*							
To consult with a lactation specialist	yes	17	45.9	22	25.6	2	28.6	27	36.0	12	29.3	2	16.7	0	0.0
	p	p>0.05						p>0.05							
To bottle feed exclusively	yes	2	5.4	4	4.7	0	0.0	4	5.3	2	4.9	0	0.0	0	0.0
	p	p>0.05						p>0.05							

## DISCUSSION

The involvement of the woman in the decision-making process during the perinatal period influences positive experiences during pregnancy, delivery and puerperium, and invokes a sense of control of the perinatal experience and of the care of the newborn baby.

Skin-to-skin contact with the newborn is of utmost importance for a mother post-delivery. Research by Augustyniuk et al. showed that direct contact with the baby following delivery was expected by 82.75% of respondents [5], and according to Pawlicka et al. as much as 95% of respondents preferred it [8]. In a paper by Fuks, it was noted that the first contact of a mother with the newborn depends on method of delivery. After a caesarean section, 4.12% of the respondents had no possibility of direct contact with the newborn due to the newborn's condition; furthermore only 12.3% of the respondents were able to have direct cheek contact with the newborn following caesarean section and only 17.8% of postpartum women benefitted from a full 2-hour skin-to-skin contact after delivery. The results of this research are thought-provoking as 13.3% of women did not achieve 2 hours of skin-to-skin contact. It was noted that in 28.7% of cases the skin-to-skin contact lasted only for a few minutes after delivery before the baby was taken for examination [9]. According to Romańska et al. uninterrupted skin-to-skin contact for 2 hours after a delivery, together with initiation of breastfeeding was observed in 3/4 of women (76%). Women were significantly more likely to have 2 hours of skin-to-skin if they had a delivery plan (83 vs. 71%;  $p=0.44$ ) [10]. Bajek's research shows the positive impact of direct skin to skin contact of mothers and babies immediately after delivery when it comes to the development and health of newborns. Newborns experiencing skin-to-skin have fewer episodes of apnea and bradycardia after birth, and go on to have more favorable weight gain [11]. Direct skin-to-skin contact immediately after delivery has been established as a key moment for bonding between a mother and a baby [10,12,13].

Surveys of Pawluczuk et al. carried out in an obstetrics and gynecology ward in the "rooming in" system show that 81% of the respondents had decided to breastfeed [14]. Similar observations were made in our own research, where a large percentage of women surveyed wish to exclusively breastfeed. On the basis of their own research Pawlicka et al. states that 94% of women wanted the first feeding to take place immediately following delivery [8]. Małańczuk et al. found out that 37.1% of postpartum women following caesarean section (without indicating the type of anesthesia) had first contact with the newborn baby within 6 hours of surgery, however this means 62.9% of women had first contact with their baby more than 6 hours following delivery. The time of the first feeding also depends on the type of delivery. Newborns delivered via caesarean section were 5 times more likely to be fed later when compared to those delivered vaginally. Twice fewer new-

borns born by caesarean section were placed to breast within the recommended time up to 6 hours after surgery as compared with vaginally born babies. The reasons for the later placement of the newborn baby to breast in more than 60% of these postpartum women after caesarean section are a topic of deeper analysis. In this group, as many as 52.7% of women reported the time of first placement to breast from 18 hours to over 24 hours after caesarean section [15]. Makara-Studzińska et al. reports that it is important that the first feeding takes place within the first two hours following delivery. This author noted that difficulties in breastfeeding at the second to third day after caesarean section were less often experienced by women whose newborns were placed to the breast within 2 hours of delivery (39.1%), and difficulties were more often experienced by women whose babies were placed to the breast later than two hours following delivery. Of the women who enjoyed early breastfeeding after caesarean section, 69.6% reported no difficulties with breastfeeding [16].

Studies by Deluga et al. showed that 68.9% of respondents expect assistance from medical staff with placing the baby to the breast. However, it is worrying that medical staff are involved in lactation advice to varying degrees [17]. According to Makara-Studzińska, 38.4% of women had difficulties with breastfeeding and the majority of the respondents (90.2%) in this study received help from staff in improving breastfeeding technique [15,16,18].

Pawluczuk et al. noted that mothers from cities are more likely to decide to breastfeed their babies, and this relationship is observed among younger (up to 35 years of age) and older women. On the basis of this research, it may be concluded that women from cities are more mature and aware of the benefits of breastfeeding [14]. Our own research has shown that women between 25-35 years of age, as well as those who have delivered fewer babies more often expect information concerning breastfeeding. This situation is likely a result of less experience and knowledge of breastfeeding

In own study, 13.8% of the respondents did not want their babies to be bottle fed in any way. Surveys by Pawluczuk et al. show that 5% of the respondents wanted their babies to be bottle fed because they had no food of their own. Research show that a large percentage (47.7%) of babies were fed in obstetric-neonatal wards [14]. Gebuza et al. noted that 33 babies out of 100 participating in the research were fed with formula. The decision to feed the baby with formula in 26 cases was made by the mother, because of difficulties with feeding; in 5 cases by a midwife; and in 2 cases the decision was made by a doctor [19]. Bottle feeding negatively influences the course of breastfeeding because it reduces the production of breast milk, and bottle fed babies do not have the same desire to breastfeed. Feeding with formula may cause the mother to lose faith in the possibility of breastfeeding, so it is important formula is to be recommended only when necessary [20].

Over half of the respondents wanted to be informed about the newborn baby's examinations and any preventive activities. In research by Pankrac et al., the majority of women were constantly informed about the newborn's health condition (72.8%), with 2.2% being informed in a casual or incomprehensible manner, and 1.1% not informed at all [21].

In own research, almost a half of the respondents expect all procedures performed with the newborn baby to take place in their or their partner's presence. As many as 71.4% of the respondents in the research by Makara-Studzińska et al. wanted the care of the newborn to be done in their presence. Makara-Studzińska et al. noted an alarming fact that as many as 28.6% of respondents indicated that these treatments were not done at all in their presence or not all of them were done in their presence [16].

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## Limitations of the study

The present study was conducted over a short period of time and had a small sample size. In future studies, a larger population size would be beneficial. Another limitation of the study was using only one tool to measure women's preferences for newborn care after delivery.

## CONCLUSIONS

1. Pregnant women expect direct skin-to-skin contact immediately after delivery, to have the umbilical cord by an accompanying person and to receive information regarding their newborn's Apgar score.
2. Pregnant women prefer breastfeeding.

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