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Analysis of the demand for nursing care and education in mothers of newborns during transitional states

Analiza zapotrzebowania na opiekę i edukację pielęgniarską u matek noworodków w trakcie stanów przejściowych

Summary

Introduction. The birth of a child is an important event in the life of both women and men. However, in many cases, the lack of skills related to caring for a newborn may cause significant difficulties for future parents. Therefore, antenatal, perinatal and postnatal education conducted by midwives and nurses working in neonatology or primary health care facilities is important for the proper conduct of antenatal, perinatal and postnatal education.

Aim. The aim of the study is to assess the need for care and education in mothers of newborns during transitional states

Materials and methods. The survey was conducted in an anonymous manner at the Provincial Specialist Hospital in Włocławek. 100 female patients took part in the study. The data obtained from the survey questionnaire, subjected to statistical analysis and presented in tables and charts, was conducted using a diagnostic survey.

Results and conclusions.

1. Most of the respondents had a sufficient (69%) level of knowledge about the transitional states of the newborn.

2. There is a significant relationship between age (p= 0.0001), education (p= 0.0021) and the number of children (p= 0.0026) and the demand for nursing care and education on the transitional states of the newborn. However, place of residence does not influence the need for nursing care and education (p= 0.25).

3. Among the surveyed respondents, the level of demand for education on transitional states of the newborn was found to be high (69%).

4. According to 82% of respondents, the health condition of the newborn influences the need for nursing care and education.

Keywords: demand for care, nursing education, newborn, mother, transitional states

Streszczenie

Wstęp. Narodziny dziecka to ważne wydarzenie w życiu zarówno kobiety, jak i mężczyzny. Jednak w wielu przypadkach brak umiejętności związanych z opieką nad noworodkiem może powodować spore trudności dla przyszłych rodziców. Dlatego edukacja przedporodowa, okołoporodowa i poporodowa prowadzona przez położne i pielęgniarki pracujące w neonatologii lub placówkach podstawowej opieki zdrowotnej jest ważna dla prawidłowego prowadzenia edukacji przedporodowej, okołoporodowej i poporodowej.

Cel. Celem pracy jest ocena zapotrzebowania na opiekę i edukację u matek noworodków w trakcie stanów przejściowych

Materiały i metody. Badanie ankietowe przeprowadzono zgodnie z zachowaniem anonimowości w Wojewódzkim Szpitalu Specjalistycznym we Włocławku. W badaniu wzięło udział 100 pacjentek płci żeńskiej. Badania przeprowadzono za pomocą sondażu diagnostycznego. Uzyskane dane z kwestionariusza ankietowego poddane analizie statystycznej i przedstawiono w tabelach oraz na wykresach.

Wyniki i wnioski.

1. Badane osoby w większości wyróżniały się dostatecznym (69%) poziomem wiedzy na temat stanów przejściowych noworodka.

2. Istnieje istotna zależność między wiekiem (p= 0,0001), wykształceniem (p= 0,0021) i liczbą posiadanych dzieci (p = 0,0026), a zapotrzebowaniem na opiekę i edukację pielęgniarską na temat stanów przejściowych noworodka. Jednakże miejsce zamieszkania nie ma wpływu na zapotrzebowanie na opiekę i edukację pielęgniarską (p = 0,25).

3. U badanych respondentek poziom zapotrzebowania na edukację na temat stanów przejściowych noworodka określono jako wysoki (69%).

4. Według 82% badanych na zapotrzebowanie na opiekę i edukację pielęgniarską wpływa stan zdrowia noworodka.

Słowa kluczowe: zapotrzebowanie na opiekę, edukacja pielęgniarska, noworodek, matka, stany przejściowe

Introduction

Informed and mature parenthood requires both parents to take responsibility for the health and life of their children. Both women and men are responsible for creating optimal conditions for a child's development before birth and improving postnatal care skills. It is important for the father of the child to acquire a basic knowledge of the physiology of childbirth, women's experiences of childbirth and future mothers' expectations regarding the father's presence during childbirth. The relevant knowledge, skills and attitudes parents acquire in anticipation of their child (whether during

individual classes or by attending birthing classes) can significantly help prepare future parents for their new childcare tasks.

In the case of illness in newborns and children, nurses, in addition to parents and legal guardians, are the first link during therapeutic treatment. All nurse actions should be based on up-to-date medical knowledge so that nurses can perform their duties reliably and professionally. Paediatrics is described in many sources as a painful story. Illness in newborns is closely associated with pain, helplessness and anxiety. Above all, these terms are an intrinsic part of illness. Beyond this, the most important qualities a nurse should demonstrate are kindness, forbearance, understanding and empathy [1].

Today's rapidly developing medicine and its advances are placing ever higher professional demands on the work of paediatric nurses in particular. An essential aspect is the observance of professional ethics. This is based on the fact that the life and health of the child are the most important assets [10].

The nurse's task is not only to nurse patients but also to eliminate negative experiences of hospitalisation. In hospital wards, very high demands are placed on each nurse. Each should demonstrate a great deal of theoretical and practical knowledge. The child is considered a very special patient to whom a completely different approach has to be taken. The nurse's tasks include talking frankly with the parents or carers and educating them about each disease entity. Each nurse should ensure the patient's mental and physical safety [4].

The care of the neonate in the ward is particularly related to the observance of aseptic and antiseptic principles. Every nurse who comes into contact with the patient should wash and disinfect their hands, wear disposable masks and gowns, and use sterile equipment. Such measures are aimed at completely reducing the risk of infection.

Nursing care of newborns in hospital wards is also linked to ensuring or forming an appropriate emotional bond between the patient and the parents or legal guardians. For parents and carers, new situations related to their child's illness are perceived as difficult. In this situation, the nurse should outline a detailed action plan and provide the basic principles of care in simple terms. Encouragement and support are the main ways to build a relationship between a newborn and its mother [16].

Aim

This study aims to assess the demand for care and education in mothers of newborns during transitional states.

Material and methods

BA group aged 18 to 45 comprising 100 mothers of full-term babies born with normal weight who were hospitalised in the neonatology ward at the Blessed Father Jerzy Popiełuszko Provincial Specialist Hospital in Włocławek was surveyed.

Respondents were predominantly aged between 26 and 39 (50%). The second most numerous group was aged between 19 and 25. It accounted for 35% of the respondents. In addition, 10% of the respondents were over 40, while 5% were under 18. Most respondents indicated that they had two children. This group accounted for 53% of all respondents. In contrast, 28% had only one child. Meanwhile, 10% and 9% had three or four children, respectively. Results on the respondents' place of residence revealed that women living in rural areas comprised the most numerous. They accounted for 68% of all respondents. Urban areas were inhabited by 32% of the respondents. A significant part of the respondents had secondary education (65%); the second most numerous group were those with vocational education (20%). On the other hand, the smallest number had primary education, representing 5% of all respondents.

The study used the diagnostic survey, questionnaire and chi-square tests for statistical analyses

Results

Analysis of the knowledge of the respondents

Question 1 in the section on the extent of knowledge of the respondents concerned physiological states. The respondents were asked to indicate what they thought the transitional states in newborns entailed. The responses to this question are presented below (Table 1).

Table 1. Transitional states in newborns, according to the respondents

What are the transitional states in newborns?	N	%
Screening tests, pathological jaundice, pulse oximetry	4	4
Physiological jaundice, transitional stools, weight loss	34	34
Pathological jaundice, neonatal immunisation	20	20
I don't know	42	42

The vast majority of respondents did not know what the transitional states in newborns were. This group accounted for 42% of all respondents. According to 34% of the respondents, transitional states mainly include physiological jaundice, transitional stools and weight loss. In addition, respondents felt that transitional states included pathological jaundice and immunisation (20%) and screening tests, pathological jaundice and pulse oximetry (4%). Another point included in the questionnaire was to determine whether every newborn undergoes physiological jaundice, according to the mothers surveyed. They had to choose one answer from three options. The responses to this question are presented below (Table 2).

Table 2. Physiological jaundice in all newborns

Does every newborn undergo physiological jaundice?	**N**	**%**
Yes	19	19
No	31	31
I don't know	50	50

Responses to this question were mixed, with most respondents not knowing whether all newborns undergo physiological jaundice (50%). In addition, 31% of respondents believed that not every newborn undergoes physiological jaundice. In contrast, 19% of respondents answered in the affirmative.

Next, the respondents were asked the name of a newborn's first stool. The responses to this question are given below (Table 3).

Table 3. Name of the first stool of a newborn

What is the name of the first stool of a newborn?	**N**	**%**
Meconium	53	53
Transitional stool	30	30
I don't know	17	17

More than half of the respondents (53%) answered that the first stool of a newborn baby was called meconium. According to 30% of respondents, the first stool is called transitional stool. In contrast, 17% of respondents did not know the answer.

Another question included in the survey concerned the occurrence of transitional stool in a newborn (Table 4).

Table 4. Occurrence of transitional stool in a newborn

When does a newborn have transitional stools?	**N**	**%**
On day 1	21	21
On day 4–5	32	32
On day 10	17	17
I don't know	31	31

The responses to this question by respondents were comparable. According to the largest number of respondents, transitional stools occur between days 4 and 5. This group accounted for 32% of all respondents. And 31% did not know the answer to this question. On the other hand, 21% answered that transitional stools occurred on day 1, and 17% thought it occurred on day 10.

The next question involved choosing the appropriate answer from the range of times at which a newborn is assessed using the Apgar score. The responses to this question are shown below (Table 5).

Table 5. Newborn assessment using the Apgar score

At which minutes after birth is the newborn assessed using the Apgar score?	N	%
1, 3, 5, 10	15	15
1, 3, 5	29	29
1, 5, 10	18	18
I don't know	38	38

The largest group of respondents did not know at which minutes after birth the newborn is assessed using the Apgar score. However, 29% answered that the Apgar score is assessed at minutes 1, 3, 5 after birth (29%). According to 18% of the new mothers, the assessment of the newborn is done at minutes 1, 5, 10, and according to 15%, at minutes 1, 3, 5, 10.

The following question concerned the Apgar scores a newborn can get. The responses to this question are shown below (Table 6).

Table 6. Maximum Apgar score a newborn can receive

What is the maximum Apgar score a newborn can receive?	N	%
Maximum score of 3	11	11
Maximum score of 5	37	37
Maximum score of 10	42	42
I don't know	10	10

ZA significant proportion of respondents, 42%, believed that the maximum Apgar score a newborn baby can receive is 10. According to 37%, the maximum score is 5. On the other hand, 11% of the respondents indicated a maximum score of 3, and 10% did not know the answer.

What is the minimum Apgar score a newborn can receive to be considered born in good condition? The responses to this question are presented below (Table 7).

Table 7. Minimum Apgar score a newborn can receive

What minimum Apgar score must a newborn receive to be considered born in good condition?	N	%
Maximum score of 8	30	30
Maximum score of 4	60	60
Maximum score of 3	10	10

The vast majority of respondents, 60 persons, or 60%, answered that the minimum Apgar score a newborn should receive to be considered healthy is 4. According to 30%, the minimum score was 8. In contrast, 10% of respondents did not know the answer.

Another question included in the survey is how to determine the correct percentage of weight loss for a newborn. The responses to this question are shown below (Table 8).

Table 8. Maximum normal percentage of neonatal weight loss

What is the maximum normal percentage of neonatal weight loss?	**N**	**%**
Under 10%	42	42
Over 10%	43	43
Over 20%	10	10
I don't know	5	5

A significant proportion of respondents (43%) answered that the maximum normal percentage of neonatal weight loss is over 10%. In turn, 42% indicated the answer under 10%. Only 10% responded that the percentage of neonatal weight loss was over 20%, and 5% had no knowledge of this issue.

Question nine of part two of the survey addressed the time it takes for the baby to compensate adequately for birth weight. The responses are shown below (Table 9).

Table 9. Time at which the baby compensates adequately for birth weight

When does the baby compensate adequately for birth weight?	**N**	**%**
After the first month of life	17	17
Around day 14	30	30
During the first week of life	30	30
I don't know	23	23

According to 30% of the respondents, the baby compensates adequately for birth weight in the first week of life. The same number of people, 30%, responded that it takes about 14 days. In turn, 17% answered that it occurs after the first month of life, and 23% of respondents did not know.

The next question was determining the day of life a newborn's physiological jaundice may become apparent. The responses to this question are presented below (Table 10).

Table 10. Day of life of the newborn in which physiological jaundice may become apparent

On which day of a newborn's life may physiological jaundice become apparent?	**N**	**%**
1	13	13
2–3	37	37
5	20	20
I don't know	30	30

The largest percentage of respondents thought physiological jaundice occurs between days 2 and 3 after birth. This group accounted for 37% of all respondents. In contrast, 30% had no knowledge of this issue. And 20% believed that physiological jaundice could become apparent on day 5. Moreover, 13% of respondents indicated day 1.

The following question regarded the day on which the physiological jaundice peaks.

Table 11. Day of life of the baby when physiological jaundice peaksj

On which day of the baby's life does physiological jaundice peak?	**N**	**%**
On day 1	12	42
On day 7	39	43
On day 3	47	10
I don't know	2	2

A significant proportion of respondents, 47%, believed physiological jaundice peaks on the third day of a newborn's life. In contrast, 39% thought it was on day seven, and 12% believed it was on day one. Only 2% of respondents did not know the answer to this question.

The next question was whether any yellowing of the newborn's skin required phototherapy. More than half of the respondents, 53%, did not know whether any yellowing of the newborn's skin required phototherapy. According to 30%, any yellowing of the newborn's skin does not require phototherapy. In contrast, 17% answered in the affirmative.

The subsequent question required indicating the methods of determining the severity of jaundice in a newborn. The responses to this question are presented below (Table 12).

Table 12. Primary method of determining the severity of jaundice in a newborn

What is the primary method of determining the severity of jaundice in a newborn?	**N**	**%**
Determination of bilirubin level	12	12
Determination of CRP level	37	37
Assessment of skin yellowing	23	23
I don't know	28	28

The largest percentage of respondents answered that determining CRP levels is the primary method of determining the severity of jaundice in a newborn. This group accounted for 37% of all respondents. Moreover, 28% did not know the answer, and 23% believed that the primary method for determining the severity of jaundice was to assess the yellowing of the skin. In contrast, 12 people, or 12% of respondents, said that determining bilirubin levels was their primary method.

Table 13. Primary treatment for jaundice

What is the primary treatment for jaundice?	**N**	**%**
Phototherapy	39	39
More frequent breastfeeding	26	26
Antibiotic therapy	18	18
I don't know	17	17

According to 39% of the respondents, the primary jaundice treatment is phototherapy. On the other hand, 26% of the respondents thought the primary method was to breastfeed the child more often. On the other hand, according to 18%, the primary treatment for jaundice is antibiotic therapy.

The next question was whether protective eyewear was necessary during phototherapy. A significant proportion of respondents indicated that protective eyewear should be used during phototherapy (54%). At the same time, 41% answered in the negative. And only 5% had no knowledge of the subject.

The next question concerned a satisfactory saturation in newborns (Table 14).

Table 14. Satisfactory saturation in newborns

What is a satisfactory saturation?	**N**	**%**
80–89	39	39
90–95%	26	26
96–100%	18	18
I don't know	17	17

According to 39% of respondents, a satisfactory saturation should be between 80 and 89%. According to 26%, it should be between 90 and 95%. In contrast, 18% of respondents said a satisfactory saturation was between 96 and 100%. And 17% did not know the correct answer.

The final question of this section regarded toxic erythema and erythema toxicum neonatorum. The respondents were asked whether these names referred to the same condition.

Over half of the respondents did not know whether toxic erythema and erythema toxicum neonatorum referred to the same condition. In contrast, 10% responded that they were the same. Only 2% answered in the negative.

Analysis of the quality of care and education

The questions in the third part of the survey concerned the quality of care and education. The first question in this section concerned who among the medical staff provided the most information about the newborn's transitional states. The responses are shown below (Table 15).

Table 15. Provision of information on transitional states of the newborn by ward staff

Who from the staff gave you information on the transitional states in newborns?	**N**	**%**
Doctor	8	8
Nurse	35	35
Midwife	57	57
Other persons	0	0

The vast majority of respondents, 57%, responded that midwives provided relevant information on transitional states in newborns during hospitalisation. On the other hand, 35% said that a nurse provided the necessary information on transitional states, and 8% indicated doctors.

The next question in the survey questionnaire assessed their knowledge about the physiological states of newborns. The responses to this question are shown below (Table 16).

Table 16. Level of knowledge about the physiological states of newborns

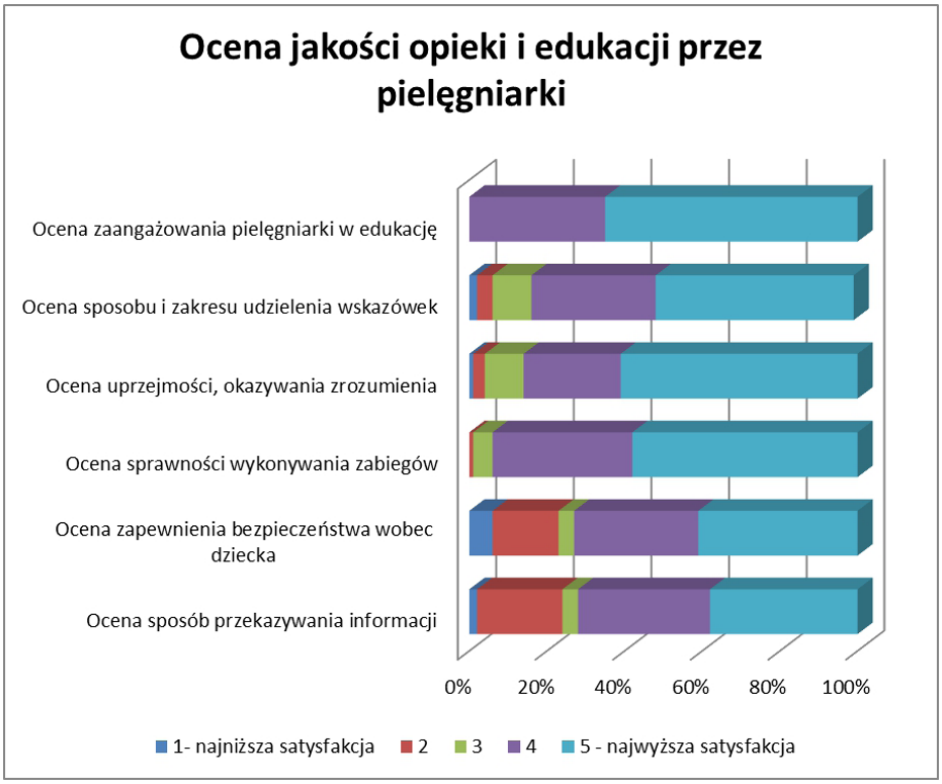
How would you rate your knowledge of the physiological states of newborns?	**N**	**%**
1 – lowest level	9	9
2	5	5
3	69	69
4	12	12
5 – highest level	5	5

Responses to this question were mixed, with the majority of respondents describing their knowledge of the physiological states of the newborn as satisfactory. This group accounted for 69% of all respondents. Some 12% of the respondents rated their knowledge as good, and 9% at the lowest level. On the other hand, 5% rated their knowledge at the highest level.

The next question was whether they felt the need for self-education on the newborn's transitional states due to their knowledge level. A large proportion of respondents (82%) said they felt the need for self-education on the newborn's transitional states. In contrast, 18% answered in the negative.

The following question was whether the respondents felt the need for nurses/midwives to educate them about the newborn's transitional states due to their level of knowledge. More than half of the respondents, 69%, felt nurses needed to educate them about the newborn's transitional states. In contrast, 31% answered in the negative.

Respondents were then asked to rate the quality of care and education provided by the nurse, taking into account the ward nurses' involvement in education, how and to what extent guidance was given, showing politeness, understanding, and interest, how and to what extent guidance was given on monitoring transitional states in newborns, and the nurses' involvement in education about transitional states.



Ocena jakości opieki i edukacji przez pielęgniarki	Assessment of the quality of care and education provided by nurses
Ocena zaangażowania pielegniarki w edukację	Assessment of nurse involvement in education
Ocena sposobu i zakresu udzielenia wskazówek	Assessment of how and to what extent guidance is provided
Ocena uprzejmości, okazywania zrozumienia	Assessment of politeness, showing understanding
Ocena sprawności wykonywania zabiegów	Assessment of intervention performance
Ocena zapewnienia bezpieczenstwa wobec dziecka	Assessment of ensuring baby's safety
Ocena sposobu przekazywania informacji	Assessment of information provision
1 – najniższa satysfakcja	1 – least satisfactory
5 – najwyższa satysfakcja	5 – highly satisfactory

Figure 1. Assessment of the quality of care and education provided by nurses

Respondents assessed how nurses provided medical information as highly satisfactory (38%) and good (34%). Only 2% scored the lowest rating in this respect. The assessment of the baby's safety during care in the neonatal unit was most often described as highly satisfactory (41%) or good (32%).

More than half of the respondents, 58%, described the efficiency of the nurse's performance of interventions for the child as highly satisfactory (58%), and 36% rated these interventions as good.

Respondents rated the nurse's politeness, understanding, and interest during the baby's stay on the ward as highly satisfactory (61%). In contrast, 25% said those interventions oscillated at a good level. A significant proportion of the respondents, 51%, rated the manner and extent of the guidance provided on monitoring the transitional states in newborns on the ward and at home as highly satisfactory.

In contrast, the nurses' involvement in educating respondents about the transitional states in newborns was rated as highly satisfactory in 65% of cases.

Analysis of the results on neonatal data

The neonatal data sheet was also used in this study. Statistical data drawn from the results are summarised below.

Table 17. Analysis of results regarding the neonatal data sheet

1. Sex	N	%
Male	67	67
Female	33	33
2. Apgar score	N	%
8 to 10	78	78
Under 8	22	22
3. Did the baby require phototherapy?	N	%
Yes	12	12
No	88	88
4. Body temperature after birth / on the day of discharge	N	%
After birth		
Normal	78	78
Abnormal	12	12
On the day of discharge		
Normal	97	97
Abnormal	3	3

5. Hormonal effects	N	%
Yes	38	38
No	62	62
6. Skin	YES	NO
	N %	N %
Pink	57	57
Yellowing	38	38
Erythema toxicum neonatorum	5	5
7. Pulse oximetry	N	%
Negative	87	87
Positive	13	13
8. Respiratory distress	N	%
Yes	9	9
No	91	91

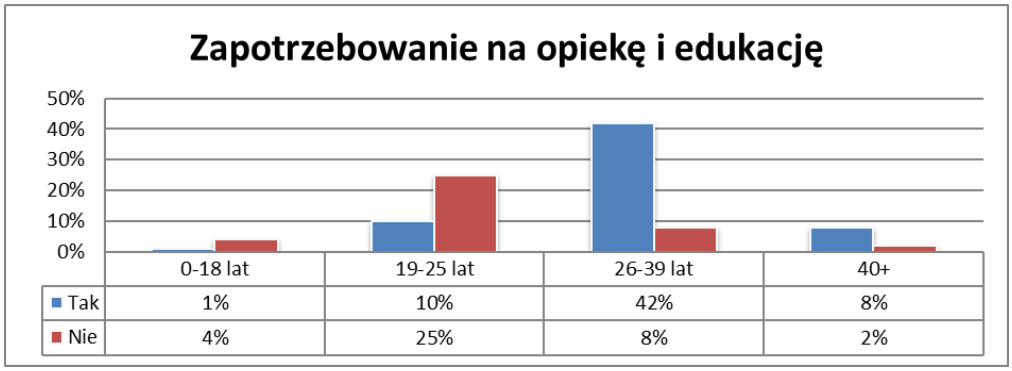
The analysed neonatal data sheets show more boys (67%) than girls (33%). As for the Apgar scores, 78% oscillated between 8 and 10. In contrast, the remainder of the newborns received a score under 8. In 88% of cases, the baby did not require phototherapy. Only 12% of the newborns required treatment with phototherapy. Body temperature after birth and on the day of discharge was normal in most cases. After birth, the newborn's body temperature was normal in 78% of cases, while it was 97% on the day of discharge. In addition, 62% of respondents reported no hormonal effects, while 38% answered that they had experienced hormonal effects during pregnancy. And 57% answered that the baby's skin was pinkish. According to 38% of the respondents, the baby's skin was yellowish, while 5% experienced erythema toxicum neonatorum. In most cases, 87%, the pulse oximetry was negative; it was positive in 13% of cases. According to 91% of respondents, neonatal respiratory distress did not occur.

Statistical analyses

The first correlation of variables to be analysed was the relationship between the age of respondents and the need for nursing care and education. The results are presented below.

Table 18. Age of respondents and the demand for nursing care and education

Age / Demand for care and education	0–18 years		19–25 years		26–39 years		Over 40 years	
	n = 5	% 5	n= 35	% 35	n= 50	% 50	n= 10	%10
Yes	1	1	10	10	42	42	8	8
No	4	4	25	25	8	8	2	2
Significance x^2	1,021							
P	0,0001							
Total	2,120							



Zapotrzebowanie na opiekę i edukację	Demand for nursing care and education
Tak	Yes
Nie	No
0–18 lat	0–18 years
19–25 lat	19–25 years
26–39 lat	26–39 years
40+	Over 40 years

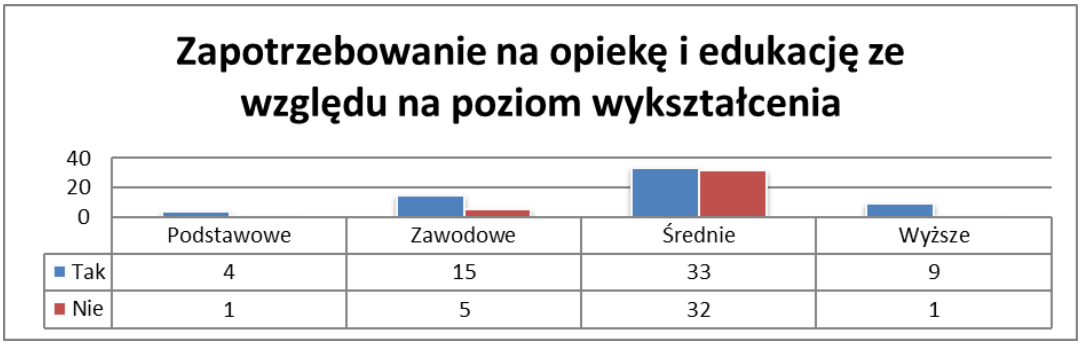
Figure 2. Age of respondents and the demand for nursing care and education

From the above correlation analysis of the variables, we can see a strong relationship between age and the need for nursing care and education about the transitional states in newborns. The younger the respondent, the lower the demand for nursing care and education. The need for nursing care and education increases with age. The highest demand for nursing care and education can be observed in the age category of 26 to 39 years. In contrast, those aged 19 to 25 did not need this care.

The second correlation of variables analysed concerned the relationship between the level of education and the demand for nursing care and education about the transitional states in newborns. The results are presented in the table and graph below.

Table 19. Level of education and the demand for nursing care and education

Education / Demand for care and education	Primary		Vocational		Secondary		Higher	
	n = 5	% 5	n=20	% 20	n= 65	% 65	n= 10	% 10
Yes	4	4	15	15	33	33	9	9
No	1	1	5	5	32	32	1	1
Significance x^2	3,10							
P	0,0021							
Total	4,01							



Zapotrzebowanie na opiekę i edukację ze względu na poziom wykształcenia	Demand for nursing care and education by level of education
Tak	Yes
Nie	No
Podstawowe	Primary
Zawodowe	Vocational
Średnie	Secondary
Wyższe	Higher

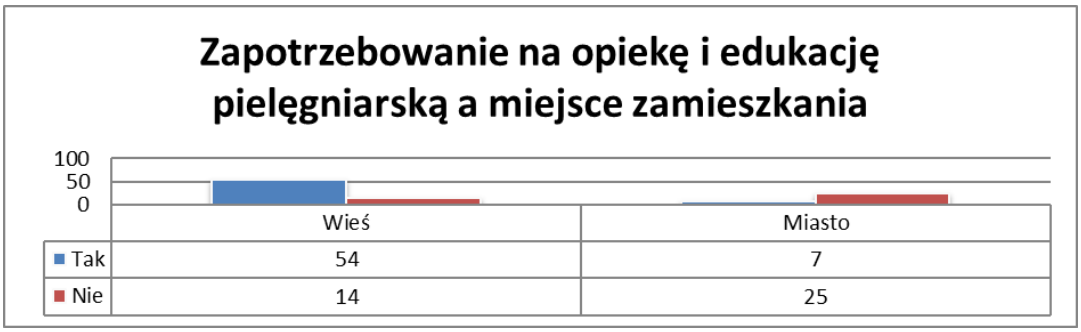
Figure. 3. Educational level of respondents and the need for nursing care and education

The above analysis also revealed a significant relationship between educational level and the need for nursing care and education. The higher the education level, the greater the demand for nursing care and education about the transitional states in newborns. Respondents with a secondary education have the highest (33%) and the lowest (32%) demand for nursing care and education.

The next summary relates to the correlation analysis between place of residence and the need for nursing care and education. These results are provided below.

Table 20. Place of residence and the need for nursing care and education

Place of residence / Demand for care and education	Rural area		Urban area	
	n = 68	% 68	n= 32	% 32
Yes	54	54	7	7
No	14	14	25	25
Significance x^2	2,5			
P	0,25			
Total	8,45			



Zapotrzebowanie na opiekę i edukację pielęgniarską a miejsce zamieszania	Demand for nursing care and education by place of residence
Tak	Yes
Nie	No
Wieś	Rural area
Miasto	Urban area

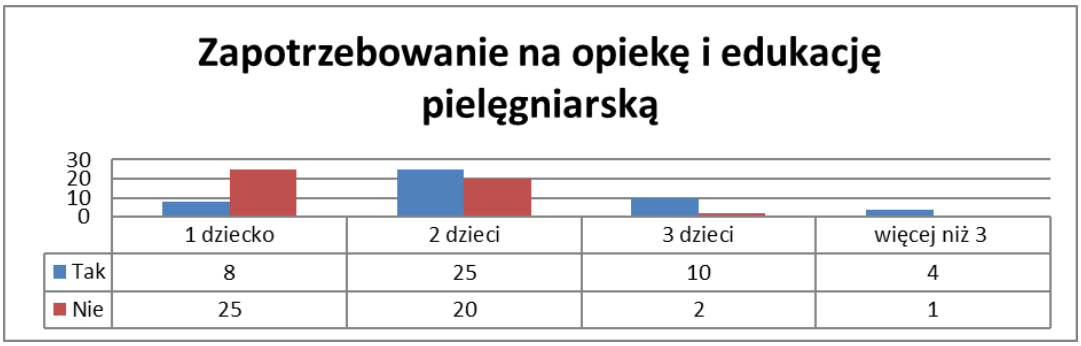
Figure 4. Place of residence of respondents and the demand for care and education

The above analysis of the results showed no relationship between the place of residence and the need for nursing care and education about newborn transitional states. Those living in rural areas (54%) have a greater need for nursing care and education compared to those living in urban areas (7%).

Below is a correlation between the number of babies and the need for nursing care and education about the transitional states in newborns. The results are shown below.

Table 21. Ilość posiadanych dzieci a zapotrzebowanie na opiekę i edukację pielęgniarską

Number of children / Demand for care and education	1 dziecko		2 dzieci		3 dzieci		4 dzieci	
	n =28	%28	n=53	%53	n= 10	%10	n=9	%9
Yes	26	26	42	42	1	1	0	0
No	2	2	9	9	9	9	9	9
Significance x^2	2,58							
P	0,0026							
Total	3,89							



Zapotrzebowanie na opiekę i edukację pielęgniarską	Demand for nursing care and education
Tak	Yes
Nie	No
1 dziecko	1 child
2 dzieci	2 children
3 dzieci	3 children
więcej niż 3	4 children and more

Figure. 5. Number of children and the need for nursing care and education

The above results suggest that the greater the maternal experience, the less nursing care and education about the newborn's transitional states are needed. Women with less maternal experience need nursing care and education much more. Those with two children (25%) and three children (10%) indicated the greatest need for nursing care and education. In contrast, respondents with one child (25%) expressed the lowest demand for care and education.

Discussion

The birth of a child is a challenge for parents, both emotionally and organisationally, as well as gaining the skills to properly care for their child. The mother's knowledge has a significant impact on the care and upbringing of the newborn and its proper development [37].

Every woman who learns that she will become a mother wants to prepare herself as well as possible for one of the most critical roles in her life. An important aspect of getting accustomed to the new reality is education about the care of the newborn. Mothers-to-be should know, among other things, about the transitional state of the newborn and its characteristic symptoms which appear in the first days of life. It is important that mothers are aware of the likelihood of these conditions and know that they are physiological states and do not require medication, only appropriate care and close monitoring [40].

The results show that the respondents did not have adequate knowledge of the transitional states that can affect newborns. Most respondents, i.e. 69%, rated the knowledge about the newborn's physiological states as satisfactory. Some 12% of the respondents rated their knowledge as good, and 9% at the lowest level. On the other hand, 5% rated their knowledge at the highest level.

Lauterbach et al. showed that the majority of respondents had a high level of knowledge [23]. Deluga et al. indicated that the mean score of the studied group's knowledge of basic issues related to the neonatal period was 24.0 ± 3.7, with the lowest score of 13 and the highest of 30. Therefore, it should be concluded that the studied group presents an average level of knowledge [11].

Kurowska and Jończyk revealed that women attending birthing classes felt well prepared to care for their newborn (23%), 7% assessed their knowledge as average, and only 1% considered themselves unprepared. Only 3% of women rated their knowledge as very good. The vast majority of respondents (58%) were able to bathe the baby by themselves after delivery, with 26% admitting that they decided to ask their husbands for help, 11% had their baby bathed for the first time by the midwife, and 5% needed help from relatives [22].

Hańczyc and Pakuła confirmed that pregnant women had some knowledge about preterm birth, but it was not entirely satisfactory. The authors draw attention to the need for greater medical personnel involvement in educating pregnant women about the correct lifestyle during pregnancy, which should be an element of prevention [15].

Our study indicates that midwives (57%) most frequently provided adequate information on transitional states in newborns. On the other hand, 35% said that a nurse provided the necessary information on transitional states, and 8% indicated doctors. Our study shows that women's awareness of health education is increasing.

Gałęziowska et al. conducted a survey among 430 women discharged from hospital after childbirth. The most frequently mentioned sources of information on newborn

care were women's media (23.7%), magazines (21.4%), family (15.8%) and birthing classes (6%) [14].

Our research also shows that a significant proportion of respondents (82%) feel the need for self-education on the newborn's transitional states. On the other hand, 69% of respondents felt that nurses should educate them on the newborn's transitional states.

Bednarek et al. reported that more than 50% of the parents studied admitted that they expected primarily therapeutic tasks from nurses caring for their newborns, followed by nursing (46%) and education (32%) [40]. However, a prospective study of 490 women by McLeod et al. revealed that a woman's psychological preparation for breastfeeding and her experience of the climate created in her prospective maternity environment influenced the duration of breastfeeding after birth [28]. Wilsson and Adolfsson's findings suggest that women mainly expect support and assistance from the nurse/midwife in solving nursing difficulties related to caring for the newborn in the hospital and at home [45].

Kazmierczak et al. showed that the age of mothers significantly determined their level of knowledge. The average level of knowledge acquired by women aged 31–41 is higher than women in other age groups [19]. Deluga et al. revealed that women aged 21–25 and 36–40 had higher levels of knowledge. A mother's education was found to be a significant predictor of her material knowledge. Other reports indicate significant differences in knowledge between groups with different educational backgrounds. Those with a master's degree have the highest level of acquired knowledge, while those with vocational education have the lowest [11].

Lauterbach suggests that factors such as age influence knowledge about physiological transitional states in newborns. Women aged 31–40 demonstrate the highest level of knowledge. The more educated the respondent, the higher their knowledge level [23].

Our study shows that sociodemographic factors, i.e. age ($p= 0.0001$), education ($p= 0.0021$) and number of children ($p= 0.0026$), influence the demand for nursing care and education on the newborn's transitional states. Place of residence does not affect the demand for nursing care and education ($p = 0.25$).

There are currently no articles available to compare the validity of these relationships.

Our results indicate that 69% of the respondents felt the need to be educated by a nurse about the transitional states in newborns. In contrast, 31% of the respondents had no such need.

Kurowska and Jończyk also reported that a higher proportion of respondents (72%) showed a need for education about neonatal care and transitional states that may occur during the first days of a newborn's life [22].

Our research also shows that a significant proportion of respondents (82%) feel the need for self-education on the newborn's transitional states. When the newborn's condition is stable, this education is needed less.

Conclusions

1. Most respondents had a satisfactory (69%) knowledge level about the newborn's transitional states.
2. There is a significant relationship between age (p = 0.0001), education (p = = 0.0021), number of children (p = 0.0026) and the need for nursing care and education on the newborn's transitional states. However, the place of residence does not affect the demand for nursing care and education (p = 0.25).
3. The need for education on the newborn's transitional states was identified as high (69%) in the respondents.
4. According to 82% of the respondents, the newborn's health status influences the need for nursing care and education.

Recommendations for nursing practice

Parents of newborns need educational support, among others. Professionals can provide parents with information, emotional support and guidance on newborn care.
Neonatal practitioners knowledgeable and experienced in neonatal care can provide the best possible care for these young patients. As a result, they can help ensure the healthy development of newborns and assist parents in caring for their babies by educating them according to their needs in this area.

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