Educational needs of parents towards a healthy newborn baby

Potrzeby edukacyjne rodziców wobec zdrowego noworodka

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Summary
Introduction: The birth of a child is not only one of the most important life events for parents, but also a challenge in dealing with many difficulties associated with the basic stages of development and nursing a newborn baby. Often, insufficient knowledge and lack of skills about the child's development and care, are the cause of considerable difficulties for the parents of the newborn child. Health education is an important element of supporting activities in medicine, especially the education of young parents. It should include knowledge of maintaining hygiene, the use of appropriate care products, protecting umbilical stump, feeding, stimulating the child, as well as the use of vaccines. As many studies show, knowledge of healthy behaviors and parents' skills in newborn care and care determine the child's health in a broad sense. The aim of the study was to analyze the state of knowledge of parents about the newborn period and childcare as well as to analyze educational needs in this area.
Material and method: The study involved 80 parents of newborns. The research method used in the work was a diagnostic survey. The survey technique in the form of a questionnaire was used to conduct the research.

Results: In assessing the knowledge transferred about neonatal care by medical staff in the maternity ward, male and female responses are mixed. Only 37% of women obtained extensive knowledge, while 63% of women insufficient and in need of supplementation. As many as 70% of the men did not receive any information from the staff, the rest (30%) of the men were given messages, but they were incomplete. The most frequently chosen form of acquiring knowledge by both female and male respondents was to talk to staff (63%) and instruct (43%). For the vast majority of respondents (95%) the concept of newborn is familiar.

Conclusions: However, the knowledge possessed by parents is incomplete. Men are ignored in parental education. Most of the respondents know the rules of childcare. Most parents need to transfer knowledge and skills from specialists.

Key words: newborn baby, parents, education

Streszczenie
Wstęp: Narodziny dziecka stanowią dla rodziców nie tylko jedno z ważniejszych wydarzeń życiowych, ale również wyzwanie w zakresie radzenia sobie z wieloma trudnościami związanymi z podstawowymi fazami rozwojowymi i pielęgnowaniem noworodka. Niewielka wiedza i brak umiejętności na temat rozwoju dziecka i jego pielęgnacji, stają się przyczyną znacznych trudności dla rodziców nowo narodzonego dziecka. Edukacja zdrowotna jest ważnym elementem działań wspierających w medycynie, a zwłaszcza edukacja młodych rodziców. Powinna obejmować wiedzę z zakresu utrzymania higieny, stosowania odpowiednich preparatów pielęgnacyjnych, zabezpieczania kikuta pępówkowego, karmienia, stymulacji dziecka, a także stosowania szczepień. Jak pokazują liczne badania znajomość zachowań prozdrowotnych oraz umiejętności rodziców w zakresie opieki i pielęgnacji noworodka decydują o szeroko pojętym zdrowiu dziecka.

Celem pracy była analiza stanu wiedzy rodziców na temat okresu noworodkowego i pielęgnacji dziecka oraz analiza potrzeb edukacyjnych w tym zakresie. Materiał i metoda: Badaniami objęto 80 rodziców noworodków. Metodą badawczą wykorzystaną w pracy był sondaż diagnosticzny. Do przeprowadzenia badań posłużyło się techniką ankietową w formie kwestionariusza.

 Wyniki: W ocenie wiedzy przekazanej na temat opieki nad noworodkiem przez personel medyczny na oddziale położniczym odpowiedzi 37% kobiet są zróżnicowane. Jedynie 37% kobiet uzyskało obszerną wiedzę, natomiast 63% kobiet niewystarczającą i wymagającą uzupełnienia. Aż 70% mężczyzn nie otrzymało od personelu jakichkolwiek informacji, pozostałe mężczyźni przekazano wiadomości, lecz były one niekompletne. Najczęściej wybieraną formą pozyskiwania wiedzy przez respondentów zarówno kobiet jak i mężczyzn była rozmowa z personelem (63%), oraz instruktaż (43%). Dla zdecydowanej większości ankietowanych (95%) znajome jest pojęcie noworodka.

Wnioski: Posiadaną przez rodziców wiedzę jest niekompletna. W edukacji rodziców pomija się mężczyźni. Większość badanych zna zasady pielęgnacji dziecka. Większość rodziców potrzebuje przekazania wiedzy i umiejętności od specjalistów.

Słowa kluczowe: noworodek, rodzice, edukacja
Introduction
The birth of a child is not only one of the most important life events for parents, but also a challenge in dealing with many difficulties associated with the basic developmental stages and nursing a newborn baby. Often, insufficient knowledge and lack of skills about the child's development and care, are the cause of considerable difficulties for the parents of the newborn child. Health education is an important element of supporting activities in medicine, especially the education of young parents. It should include knowledge of maintaining hygiene, the use of appropriate care products, protecting umbilical stump, feeding, stimulating the child, as well as the use of vaccines. As numerous studies show, knowledge of healthy behavior and parents' skills in the care and care of a newborn baby determine the broadly understood health of the child. It helps to support the proper development of the child and often also prevents the consolidation of irregularities through early intervention [1,2,3,4]. Conscious and mature parenting requires both parents to be responsible for the child's health and life, i.e. realizing the lack of knowledge and skills, feeling the need to fill these deficiencies and finally take specific actions. Nurses, as well as midwives working directly with parents and the child, whether in the framework of hospital or community care, play an important role in this process [5,6,7].

Objective of the work
The aim of the study was to analyze the state of knowledge of parents about the newborn period and child care as well as to analyze educational needs in this area.

Material and method
The study involved 80 newborn parents. Patient selection was random. The respondents were acquainted with the purpose of the survey and anonymity in their implementation. The research group differed mainly in such features as: age, gender, education and place of residence. The group consisted of 75% women and 25% men.

The research method used in the work was a diagnostic survey, while the research tool used was a self-questionnaire questionnaire consisting of 32 open and closed questions. All statistical calculations were performed using the StatSoft, Inc. statistical package. (2011). STATISTICA (data analysis software system), version 10.0. www.statsoft.com., statistical package R version 2.15.1 and Excel spreadsheet.

Results
75% of women and 25% of men participated in the study. The most numerous group among the respondents are people with secondary education (48%), 31% are people with higher education. 15% have professional education among the respondents. The least numerous group of 6% have basic education. The greater half of the respondents live in the urban area (53%), while 47% of the respondents live in the countryside. The largest group of respondents were people in the 19-25 age group, which is 35%. Respondents in the 26-30 and 31-40 age groups account for 52%. The group of respondents up to 18 years old constituted 6%. Whereas the least numerous age group 5% are respondents over 40 years of age. The largest number of respondents (49%), according to their own opinion, have knowledge about newborn care, but it is incomplete and requires supplementation, 37% of respondents believe that they are largely prepared to take care of a newborn baby. The least numerous group (14%) are the respondents who do not have sufficient knowledge on this subject. Another element of the study was the assessment of knowledge transferred about the care of the newborn by medical staff in the maternity ward. The responses of men and women vary widely. Medical staff provided information on this topic to each of the women, only 37% of the women obtained extensive knowledge, while 63% of the women received insufficient and
requiring supplementation. As many as 70% of the men did not receive any information from the staff, the rest (30%) of the men were given messages, but they were incomplete. According to the conducted research, the most frequently chosen form of acquiring knowledge by both female and male respondents was a conversation with staff (63%) and instruction (43%). None of the men chose the option of education by providing educational materials, 7% of women surveyed were in favor of this form (Table 1).

Table 1. Form of education most often chosen by parents.

| Form of conducting education                                      | Women | Men | Total |
|-------------------------------------------------------------------|-------|-----|-------|
|                                                                  | N=60  | N=20| N=80  |
| Instruction carried out by a nurse with the participation of parents | 25    | 9   | 34    |
| Talking to a nurse to supplement parents’ knowledge               | 38    | 15  | 53    |
| Providing educational materials                                  | 11    | 0   | 11    |
| Altogether                                                        | 60    | 20  | 80    |

The study examined the parents' opinion on the need to conduct patronage visits. Both women (72%) and men (75%) describe patronage visits as very needed, the remaining respondents consider patronage visits to be of little use. The most common sources of information on newborn care for respondents were: books (84%), information from a doctor / nurse (51%), Internet (45%), advice from friends / family (24%), magazines (17%) (Table 2).

Table 2. The need for midwifery visits by midwives according to parents.

| The need to conduct patronage visits | Women | Men | Total |
|-------------------------------------|-------|-----|-------|
|                                     | N=20  | N=60| N=80  |
| Badly needed                        | 15    | 43  | 58    |
| Not useful                          | 5     | 17  | 22    |
| Unnecessary                         | 0     | 0   | 0     |
| Altogether                          | 20    | 60  | 80    |

For the vast majority of respondents (95%) the concept of newborn is familiar, they know that it is a child from birth to 28 days of age. Only 3% of respondents said they were a child after the age of 28, the remaining 2% said they were a child up to the age of 12 months. Another element of the study was to check the knowledge of the concept of newborn born by parents. Most respondents (85%) know that the term refers to a child born between 37 and 42 weeks of pregnancy. 9% of respondents said that it was a child born after 42 weeks. The least numerous group constituting 6% do not know this concept. According to all surveyed men, breastfeeding is the best way to feed a child. As for the surveyed women, only 3% said that this is not the best way of feeding (Table 3).
Table 3. Parents' opinion on breastfeeding.

| Breastfeeding the best way to feed a newborn baby | Women | Men | Total |
|--------------------------------------------------|-------|-----|-------|
|                                                  | N=60  | N=20| N=80  |
| Yes                                              | 58    | 20  | 78    | 97%  |
| No                                               | 2     | 0   | 2     | 3%   |
| I don't know / I have no opinion                 | 0     | 0   | 0     | 0%   |
| Altogether                                        | 60    | 20  | 80    | 100% |

The respondents' knowledge of when a newborn should be attached to the mother's breast after delivery is different. 59% of women and 35% of men know that a newborn baby should be attached to the breast within 2 hours after delivery. However, more than half of the men (55%) and 33% of women have no knowledge of the subject. The least numerous group of respondents (9%) replied that the first feeding attempts should take place 12 hours after delivery. Most of the respondents, as much as 95% say that breastfeeding strengthens the bond between the child and mother, 4% of respondents believe that the way of feeding is not important in building the maternity relationship, and 1% of respondents said that natural feeding does not strengthen the bond. The study assessed parents' knowledge of the concept of on-demand feeding. Among the women surveyed, 67% know that it is feeding a child when hungry or when the breasts are full, while 27% of them said that it is feeding a child when he cries. More than half of men (55%) incorrectly claim that this is about feeding a baby when he cries. However, the remaining part of the surveyed men 45% responded with the correct answer. The least numerous group of respondents (5%) said that this is regular feeding, every hour (Table 4).

Table 4. Parents' knowledge of the concept of feeding as needed.

| Feeding as needed                                                   | Women | Men | Total |
|--------------------------------------------------------------------|-------|-----|-------|
|                                                                    | N=60  | N=20| N=80  |
|                                                                    | %     | %   | %     |
| Feeding your baby when hungry or when your breasts are full        | 40    | 9   | 49    | 67%  |
| Regular feeding, every hour                                        | 4     | 0   | 4     | 6%   |
| Feeding when the baby is crying                                    | 16    | 11  | 27    | 27%  |
| Altogether                                                         | 60    | 20  | 80    | 100% |

Most respondents (78%) know that during the bath the water temperature should be 37 C, and the air temperature 22-25 C. A group of 22% of respondents believe that the temperature should be 35 C and air 26-27 C. Most respondents, as much as 94% know that the face of a newborn baby is washed with boiled lukewarm water, 5% of respondents say that soap and water should be used. Among the respondents, 1% would use running water to wash their faces. Most respondents, because as much as 91% of people know that correctly the eyes of a newborn are washed with boiled water, from the outside inwards using a new swab for each
eye. Among the respondents, 8% of people would wash the eyes of a newborn with boiled water, without changing the swab, 1% of respondents say that they should not rinse their eyes until the first month of the child's life. The study checked parents' knowledge about how to care for an umbilical stump. Only 19% of respondents correctly answered that the umbilical stump is cared for without using any care products, i.e. "dry care" is used. Most respondents, 77% of women and 85% of men think that the umbilical stump should be cared for with 70% spirit or a solution of rivanol (Table 5).

Table 5. Care method for umbilical stump.

| Care of the umbilical stump | Women | Men | Total |
|----------------------------|-------|-----|-------|
|                            | N=60  | N=20| N=80  |
| Dry                        | 12    | 3   | 15    | 19%   |
| 70% alcohol                | 46    | 17  | 63    | 79%   |
| A solution of rivanol      | 2     | 0   | 2     | 2%    |
| Altogether                 | 60    | 20  | 80    | 100%  |

According to 62% of respondents, the umbilical stump should fall off after 10-14 days of a newborn's life. The next group of respondents 19% believe that this should happen in the 4th to 5th day of life. 15% of respondents do not know the answer. The least numerous group of respondents (4%) said that the stump should not fall off at all. Most respondents (76%) correctly think that the baby's buttocks should be washed after each passing of the stool, 21% of respondents think that there is no such need, and 3% of respondents do not know the answer to this question. The largest group of respondents (71%) believe that mecon is excreted within 24-48 hours after birth, 13% do not know when this should happen, 10% responded that mecon is excreted throughout the entire neonatal period, and 6% believe that this is done within the first week. The largest group of respondents (72%) believe that boys' genitalia is washed with a swab using boiled water without sliding the foreskin, 15% say the same, but sliding the foreskin, and 13% think that they should not be washed, because it is sufficient that they come into contact with water during bathing. Most of the respondents, as much as 82% said that the area around the labia in girls is washed with a gauze pad with boiled water, with one movement towards the anus, 18% believe that there is no need to wash them, because contact with water during bathing is sufficient. The majority of respondents (79%) claim that the head of a newborn is washed gently with soap and water, 20% think that it is enough to wipe it with a moist gauze, and 1% of respondents say that it should not be washed, because the fontan could be damaged. In the next part of the study, parents' knowledge of newborn transitions was assessed. The majority of respondents (73%) gave the correct answer that the physiological weight loss of a newborn should be 10% of birth weight, the next group of respondents said that a newborn should not lose weight (21%). The least frequently respondents replied that the weight loss reached more than 10% of birth weight (6%). The largest group of respondents, constituting 69%, know the term "neonatal erythema", 27% of respondents said that they were erythema caused by a change in temperature, and the remaining 4% of respondents said that they were good cheeks. 49% of respondents do not know what to do when the baby is pregnant. Among the respondents, 41% know that this is a transient condition and does not require any action, 10% of respondents said that this condition requires a compress of warm olive oil. Over half of the surveyed women (58%) declare that they know the actions in the case of physiological jaundice in the
newborn, while 42% know the procedures. Considering men, up to 75% of them do not know what to do in the event of newborn jaundice.

**Discussion**

Parents' preparation for caring for a newborn baby, especially at home, requires knowledge of nursing, adaptation processes, but also appropriate skills. Lack of preparation, especially for young parents and emerging stressful situations in childcare cause difficulties in dealing with existing problems, and often frustrations. Adapting to living at home with a newborn baby is a difficult task. Often, parents derive knowledge on a given topic from the Internet, but not all information is true and provided fairly [8,9,10]. In the research by Filipowicz (2018) the main source of knowledge indicated by parents turned out to be the Internet (84.8%), the next sources were friends (67.7%) and family (50.5%), while the books were marked by less than half of the respondents (48.5%) [2]. In the research by Deluga et al. (2012), the majority of parents indicated as a source of knowledge medical staff (73.8%) and books (58.6%), while the Internet only 46.9% of respondents [1]. Our own research shows that the most frequently chosen form of acquiring knowledge by both female and male respondents was a conversation with the staff (63%) and instruction (43%). Thanks to education provided by professionals, which should be based on the assessment of parents' shortages and needs, it allows for solving nursing difficulties related to taking care of a newborn baby both during a stay in the hospital ward and at home [9,10,11]. The knowledge transmitted should primarily concern the most basic information, because it is they that raise the most doubts and questions. Bathing is a time of close contact with parents, often being part of the child's preparation for sleep. It is very important for the child to associate toilet time with warmth and closeness. Since the newborn's thermal system is immature, and the heat loss during bathing results mainly from evaporation of wet skin, it is important that the mixing temperature is 21-22 C, and water 37C [12,13]. Bathing should take place 2-3 times a week until the child begins to crawl or according to local cultural customs. The toilet, boiled water, starts from the eye toilet in the direction from the temples to the nose with one movement of each eye with a separate, clean cotton swab, then the face and genitals. In girls, the labia are cleansed from the pubic hill to the anus, and in boys the penis is washed in a circular motion. The skin during bathing should not be rubbed, but washed by immersion using liquid cleansing agents containing emollients, which provide better skin protection and are more suitable than preparations in cubes. The water in the tub should reach the hip line of the child. After finishing the bath, the baby should be immediately dried and dressed, and in the case of skin lesions, use emollient. The umbilical stump is the most vulnerable part of the newborn's body, so proper care is of the utmost importance. In Poland, there is a "dry belly button care" to allow it to dry naturally. Once a day, the stump is cleaned with a clean swab moistened with water, then dried, without the use of alcohol and disinfectant dyes, while ensuring access of air to the healing navel. Avoid diaper stump irritation and it is not dangerous to wet the umbilical stump while bathing. Not falling off the stump after 15 days of life is an indication for medical consultation [14,15,16,17]. In the study of Kaźmierczak et al. (2018), the correct answer to the question about the temperature of the newborn's bathing water was given by 82% of the respondents, and only 13% of women knew what dry umbilical stump care is [11]. In the own research, only 19% of respondents knew how to properly care for the umbilical stump, and most respondents (78%) knew what the temperature of the water and the environment should be during bathing. In addition to care, nutrition is a fundamental issue in childcare. The standard in enteral nutrition of newborn babies is the use of breast milk. The latest recommendations of the ESPGHAN expert group suggest reference values of enteraly administered food volume at 150-180 ml / kg / day in the form of breast milk. In the absence of breast milk, modified milk or milk replacers should be used for full-term newborns. The
The main indicator of a child's proper nutrition is weight gain of about 12-16 g / kg / day [18.19]. In the study of Kaźmierczak et al. (2018), the vast majority of respondents (83%) breastfed their children at the time of the study. Only a small proportion of women did not feed naturally (17%). Most respondents (94%) knew that they should breastfeed their baby on demand, and 82% of women replied that daily feeding must be between 6 and 8 [11]. In the study by Gebuzy et al. (2016), the correct number of feedings per day was given by 54% of women. In another study, 76.6% of parents determined the number of on-demand newborn feeding, indicating that it was at least 6-8 daily feeding [20,21]. In the own study, according to all surveyed men, breastfeeding is the best way of feeding a child, and only 3% of the surveyed women said that this is not the best way of feeding. The study assessed parents' knowledge of the concept of on-demand feeding. Among the women surveyed, 67% know that it is feeding a child when hungry or when the breasts are full, while 27% of them said that it is feeding a child when he cries. More than half of men (55%) incorrectly claim that this is about feeding a baby when he cries. However, the remaining part of the surveyed men 45% responded with the correct answer. The least numerous group of respondents (5%) said that this is regular feeding, every hour.

Conclusions
1. The knowledge possessed by the parents is incomplete.
2. In education of parents, men are omitted, very often no one gives them information on topics related to the newborn are forced to expand their knowledge on their own.
3. Most of the respondents know the rules of childcare. An exception, however, is the degree of knowledge regarding the care of the umbilical stump. As studies show, parents do not know the latest guidelines for stump care, which were introduced in Poland in 2010.
4. Most parents need to transfer knowledge and skills from specialists. Information provided during patronage visits can be valuable tips especially for inexperienced parents.

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