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Attitudes towards breastfeeding among mothers of children treated at the University Children's Hospital in Lublin

**Paula Jankowska¹, Krzysztof Jankowski¹, Agata Tarkowska², Jakub Haracz²,
Monika Tadla²**

1. Chair and Department of Family Medicine, Medical University of Lublin

2. Department of Neonate and Infant Pathology, Medical University of Lublin

ABSTRACT

Introduction

According to the current state of knowledge, breastfeeding is the best method of feeding newborns, infants and young children. World organizations and associations and authorities of the medical world recommend breast milk as the most suitable for the proper development of the child. Natural feeding brings many important health benefits, both for the mother and the child, and promotes the formation of emotional ties. It is also economical and convenient to use.

The purpose of the study was to assess the attitudes of women towards breastfeeding and the state of their knowledge on the subject.

Material and methods

The study group consisted of 96 mothers of children treated in the Department of Neonate and Infant Pathology at the University Children's Hospital in Lublin. The study used the method of a diagnostic survey using a questionnaire constructed by the authors. The obtained results were analyzed using the STATISTICA 12.5 program.

Results

53.9% of respondents gave a positive answer to the question about breastfeeding their own child. As the main reasons for its interruption were given most often too little food (36.6%) and child's illness (26.8%). 79.8% of women replied that the help of health care workers in breastfeeding training is needed, but only 56.2% of respondents believe that the information obtained was sufficient. Only 41.6% of respondents knew that lactation affects fertility and the possibility of becoming pregnant. In the question whether breastfeeding allows a better relationship between the mother and the child, 95.5% gave a positive answer. 98.9% emphasized the positive impact of breastfeeding on the relationship between parents. As many as 60.7% of women intended to give up natural feeding after returning to work.

Conclusions

A surprisingly high percentage of women resign from natural feeding, despite relatively good knowledge about the benefits resulting from it. Advice from healthcare professionals is an important source of information for women. Breastfeeding after returning to work is an important problem.

Keywords: Breastfeeding, Diet, Knowledge, Attitude, Mothers

INTRODUCTION

According to the current state of knowledge, breastfeeding is the best method of feeding newborns, infants and young children, providing them with optimal health and development. The World Health Organization (WHO), the American Academy of Pediatrics (AAP) and European (ESPGHAN) and the Polish Society of Gastroenterology, Hepatology and Children's Nutrition (PTGHiŻD) have been struggling for years to recognize the supremacy of natural feeding over the use of artificial mixtures [1,2,3,4]. It is recommended that the baby should be fed exclusively with breast milk for the first 6 months of life and then maintain breastfeeding for a period of at least two years with age-appropriate supplementary food [1]. Further, the ESPGHAN Committee on Nutrition and Polish Society for Paediatric Gastroenterology, Hepatology and Children's Nutrition guidelines remain in line with mentioned WHO recommendations, suggesting full breastfeeding for about 6 months as the best nourishment approach [3,4].

The infant period is crucial for the proper development of organs and tissues, which is why the quality of nutrition has a huge impact on many processes that condition health in childhood and in adulthood. It should be remembered that breast milk contains the perfect proportions of all the nutrients necessary for a child, such as minerals and nutrients, hormones, enzymes, antibodies, antibacterial and anti-inflammatory ingredients [3,5]. Until the 6th month of the child's life, it is not recommended to additionally feed and drink with water, teas, juices or other liquids [3,4].

Natural feeding is associated with a lot of health benefits for both mother and baby. One of the best documented is a significant reduction in morbidity and mortality from gastrointestinal infections in newborns and infants. In addition, there is a less frequent or milder course of respiratory infections, middle ear infections, bacterial meningitis, sepsis, urinary tract infections and necrotizing enterocolitis. Probably breastfeeding also reduces the incidence of type I and type II diabetes, lymphomas and leukemia, overweight and obesity, hypercholesterolemia, allergic diseases, and sudden infant death syndrome [2,6,7]. Among the benefits for mothers are mentioned reduced the risk of postpartum bleeding, uterine involution acceleration, faster return to pre-pregnancy body mass, increased bone mineralization, as well as reducing the risk of ovarian cancer and breast cancer in postmenopausal period [2,6,7,8].

Breastfeeding promotes creating emotional bond between mother and child. A woman during lactation is calmer, more optimistic and satisfied. It was proven that breastfeeding women less likely develop a reaction of children rejection. This process of building ties have huge importance for the child's development and the formation of good relationships in the whole family. Moreover, it is noticeable that breastfeeding may exert analgesic effect [9, 10].

An important advantage of breastfeeding for Polish families is the fact that this is cheap, because does not produce high cost of infant formulas, and accessories necessary for artificial feeding. Breastfeeding is also very convenient - food is available at any time, is always fresh, has an appropriate temperature and is ready to eat [7,11]. Despite so many positive aspects of natural feeding, many women still resign from it, not suffering from justified contraindications to its use.

AIM OF THE STUDY

The purpose of this the study was to assess the awareness and attitudes of women towards breastfeeding and the state of their knowledge on the subject.

MATERIAL AND METHODS

The study group consisted of 96 mothers of children treated in the Department of Neonateand Infant Pathology at the University Children's Hospital in Lublin. 7 polls were rejected due to conflicting answers. The study was conducted on randomly selected days of February - July 2017. Participation in the study was voluntary and anonymous. The age group 20-30 years had 37.1 % of respondents, 30-40 years – 59.6 %, 40-50 years – 3.3%. No representative of the age group above 50 years of age participated in the study.

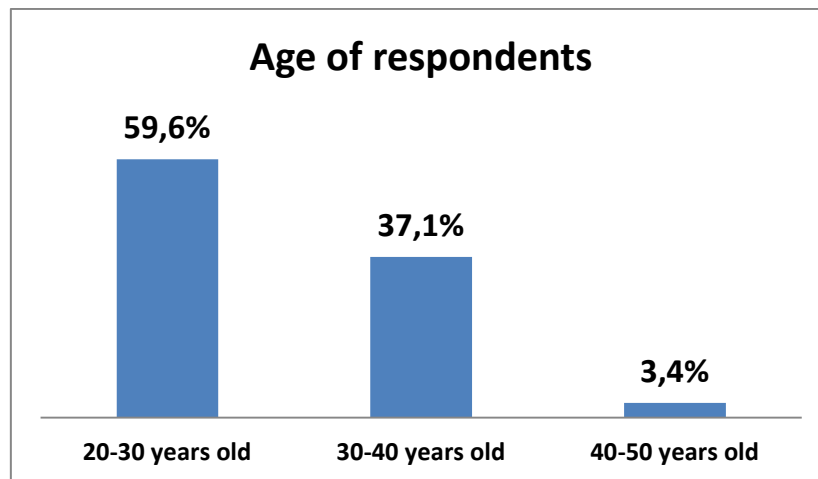


Fig.1. Age of respondents.

The level of education of the respondents was as follows: 1.1 % -basic education, 6.7 % - basic vocational, 40.5 % - medium, 51.7 % - higher education.41.6% of the respondents had one child, the same percentage responded that they had two children, 10.1% of the respondents had three children, and 6.7% had 4 or more children. The study used the method of a diagnostic survey using a questionnaire constructed by the authors. The survey contained 31 questions and consisted of two parts. The first part allowed for obtaining socio-demographic data (age and marital status) of study participants, level of education, number of children, financial conditions, place of residence). The second part concerned the knowledge of women about natural feeding, theirs attitudes and factors affecting the decision about natural or artificial feeding, cooperation with healthcare professionals regarding the providing information on natural feeding, sources of information most often used by mothers and their dietary decisions. The questionnaire contained closed - alternative, disjunctive and conjunctive questions. The obtained results were statistically analyzed using the STATISTICA 12.5 program. The results of the survey are described depending on the age, level of education, financial conditions and place of residence of mothers. The analysis of the collected data is the basis for further applications.

RESULTS:

The most important and at the same time very worrying information obtained on the basis of the survey is the percentage of women who breastfeeds their children. Only 53.9% of the respondents gave a positive answer to this question.

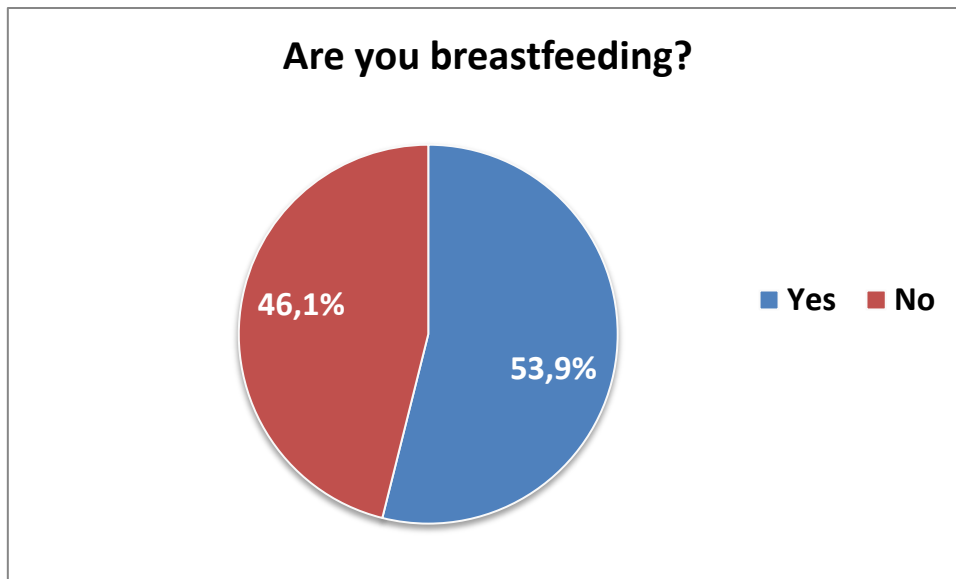


Fig.2. Declaration on breastfeeding.

The main reasons for the end of natural feeding were most often: too little food (in mother's opinion) (36.6%), child's disease (26.8%), problems with placing the child in the breast in the absence of sucking reflex (14.6%), taking drugs contraindicated during breastfeeding (9.6%), prematurity (7.3%) and another pregnancy (4.9%). Other causes included: strong breast soreness, total loss of lactation for health reasons in the mother.

67.4% of the women surveyed independently decided to start breastfeeding, 10.1% together with the father of the child, 4.5% with the help of a doctor or midwife. The decision to discontinue breastfeeding was made by 58.5% of mothers independently, 14.6% with the father of the child, and only 26.8% after consulting the doctor and 2.4% after consulting the midwife. In questions about the help of health care workers in breastfeeding training, 79.8% of women answered that it is needed, but only 56.2% of respondents believe that the information they received from doctors and midwives was sufficient.

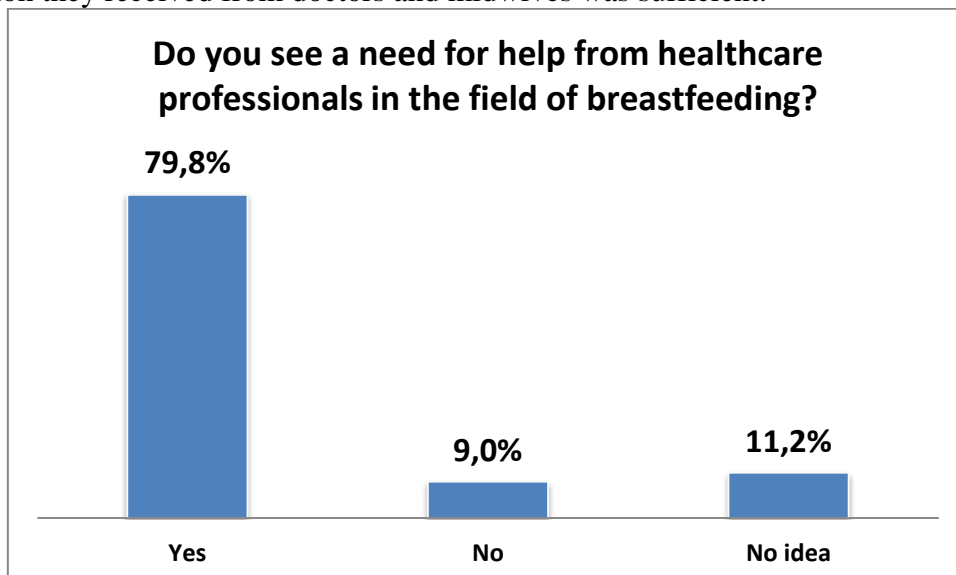


Fig.3. Opinions on need for help from healthcare professionals in the field of breastfeeding.

Women living in rural areas significantly more often indicated that the information they obtained was not sufficient ($p=0,01$) compared to women living in cities over 100 thousand residents. In the question about the level of contribution of healthcare workers (on a scale of 1 to 5) in deciding whether to breastfeed or abandon it, only 14.6% rate it at 5 and 15.7% at 4, and as many as 22.5% rate it on 1.

In questions about knowledge about natural feeding, the surveyed showed a relatively good knowledge of the rules and recommendations. In all of the following questions women had the opportunity to answer "yes", "no" and "do not know". 95.5% of mothers knew that the baby should be fed with colostrum, and 88.8% respondents were aware that newborns and infants should be fed on demand. 84.3% of women correctly answered the question whether it is necessary to terminate the natural feeding between the 6th and 7th months of the child's life. In the question whether breastfeeding should be interrupted during the child's illness, 95.5% of women denied. 82% of respondents answered that breastfeeding does not increase the risk of diarrhea in the child, but only 32.6% gave the correct answer in the question concerning risk of jaundice in the baby. In the question whether breast milk should be temporarily interrupted during breast infection, 32.6% of women answered "yes", 44.9% - "no" and 22.5% "I do not know". Only 41.6% of respondents knew that lactation affects fertility and the possibility of pregnancy.

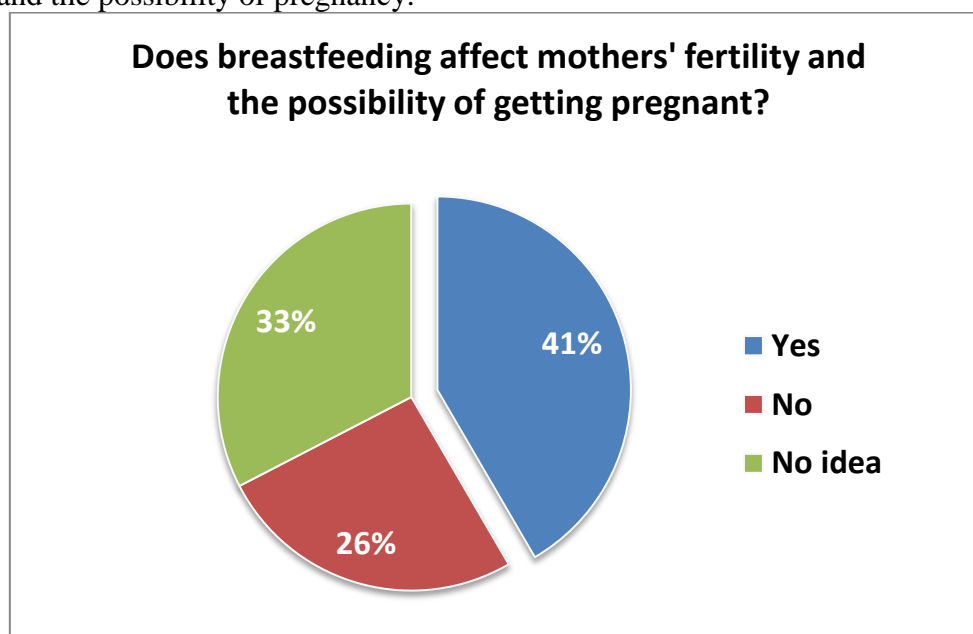


Fig.4. Opinions on breastfeeding influence on fertility.

In the question of whether modified milk formulas should be introduced as supplementary feeding after the 6th month of a child's life, 67.4% gave a negative answer, 16.9% positive, and 15.7% did not know the answer to this question. Significantly more often the correct answer was given by women with higher education ($p=0.00155$).

In the part of the questionnaire assessing women's attitudes towards breastfeeding, alternative questions were used. In the question whether breastfeeding allows a better relationship between the mother and the child, 95.5% gave a positive answer. 98.9% emphasized the positive impact of breastfeeding on the relationship between parents. Only 2.2% of mothers claimed that breastfeeding is old-fashioned. Unfortunately, as many as 60.7% of women intended to give up natural feeding after returning to work. It is important for health care workers that 95.5% of respondents believed that doctors and midwives should encourage mothers to breastfeed.

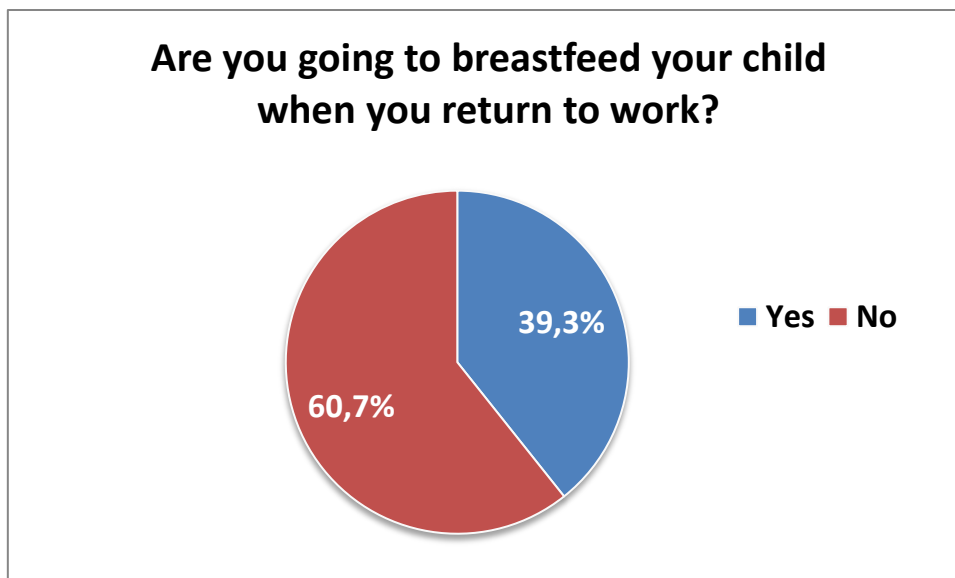


Fig.5. Evaluation of breastfeeding plans after returning to work.

In multiple-choice questions regarding situations in which breastfeeding is contraindicated, the respondents most frequently indicated: mother's HIV infection (59.6%), mother's antibiotic therapy (56.2%), advanced maternal cancer (48.3%), hepatitis C (42.7%), severe maternal mental illness (33.7%), hepatitis B (31.5%), and mastitis (29.2%).

The most frequently indicated sources of information on breastfeeding among the respondents were: advice of healthcare professionals (59,6%), the Internet (58,4%), friends (39,3%), childbirth school (25,8%) and magazines for mothers (24,7%), leaflets and posters in clinics (18%). A small share of professional literature (13,6%) and television (9%) is noticeable.

Source of knowledge	%
Professional literature	13,5%
Magazines for mothers	24,7%
Internet	58,4%
Advices from healthcare professionals	59,6%
Leaflets and posters in outpatient clinics	18,0%
Birthschool	25,8%
Friends	39,3%
Television	9,0%
Other	2,2%

Tab.1. Sources of knowledge about breastfeeding.

In the multiple choice question directed exclusively to nursing mothers concerning products being part of their current diet, most women gave a positive response for cereal products (light bread, dark bread, groats) and potatoes. Poultry and fish were most often chosen from the meat products. As sources of protein in the diet, eggs, natural yoghurts, white cheese, cheese and cow's milk were often indicated. There was clear tendency to resign from margarine for butter. Among vegetables carrots, tomatoes, lettuce, cucumbers were most often chosen, and legumes, cabbages, broccoli and onions were abandoned. Few women decided to eat fruit that has a stronger allergenic potential (strawberries, citrus fruits) and nuts. From drinks group surveyed mothers marked tea, coffee, cocoa, and they rarely chose sweetened

beverages. None of the mothers admitted to use in diet alcoholic products, and a small percentage introduces into the diet fast-food products.

DISCUSSION:

The results of current surveys indicate that the percentage of breastfeeding women is unsatisfactory. Our study included mothers of children from birth until the age of 12 months and in this group less than 54% of women fed their children naturally. Research by Mikiel-Kostrzyra et al. proved that 92% of mothers undertook an attempt to breastfeed after birth, but when a child reached 6 months of age it was continued only by 57% of them [12]. According to Zagórecka et al. at 6 months of age, only 68% of children were naturally fed, and only 4-9% received breast milk solely, without any child formulas [13,14]. Only in 4 countries belonging to the European Union, the percentage of mothers who exclusively breastfed their child at the age of 6 months was over 30%. In the economically underdeveloped countries the majority of infants ending 12 months of age is still breastfed, in many countries with high income per capita the percentage is less than 20% and in Great Britain this ratio is <1% [15].

Taking up breastfeeding depends on the mother's willingness and decision. To counteract resignation from natural feeding, information support must be provided earlier [16-18]. Although, it is accepted that parents are responsible for making decisions about breastfeeding their children, the role of healthcare professionals, including pediatricians, is to protect, promote and support breastfeeding. According to own research, 58.5% of mothers took their decision to stop breastfeeding on their own, and 14.6% with child's father. Hardly slightly more than one-third of surveyed took their decision after consultation with the healthcare professional. Despite this fact, 79.8% of women answer that help of healthcare workers in learning breastfeeding it is needed. However only 56.2% of respondents found the information they receive as sufficient. As many as 22.5% of respondents estimated that health care workers had not had any influence on breastfeeding or resignation from it.

In the first months of life, feeding "on demand" is recommended, which means that the child should eat when he wants and for how long he wants [4]. In own studies, 88.8% of the respondents correctly answered the regularity of breastfeeding. One of the most important health benefits in relation to breastfeeding, especially in developing countries, is a preventive effect on infections. The analysis of the Agency for Healthcare Research and Quality (AHRQ) showed that breastfeeding was significantly associated with a lower risk of gastrointestinal infection [19,20]. A recent survey by Quigley et al. showed that breastfed infants had a reduced risk of diarrhea when compared to infants fed in other ways [21]. In our study, 82% of respondents were aware that breastfeeding reduces the risk of diarrhea in a child.

Infants should not be administered milk formulas, because requisition for breast milk lowers and as a result insufficient breast stimulation causes reduced production of breast milk. Only a doctor in the situation if the child's weight gain is not sufficient, may decide to introduce supplementary foods earlier [5 or 6 months] [4]. In studies by Klejewski et al. it has been shown that the vast majority of women (98%) know perfectly well that children fed naturally should not be additionally fed [22]. They found a statistically significant relationship between the level of education and the proper way of feeding children ($p=0.04$). The analysis of our own research showed a high percentage of correct answers (67.4%) in the question whether modified milk should be introduced as complementary feeding after the 6th month of the child's life. Significantly more often the correct answer was given by women with higher education ($p=0.00155$).

In every breastfeeding mother, in the initial stage, the so-called lactating infertility is present, when a woman does not have ovulation or menstruation for some time [11]. In women who breastfeed partially, the return of fertility was observed as early as 3-6 weeks after delivery. In the case of exclusive breastfeeding at least six times a day (also at night), returning fertility is described within more than 12 weeks after giving birth [23]. In a study conducted by the Cierpka et al. 47.47% of the surveyed patients know that natural feeding affects the fertility of the nursing woman [24]. In the own study, this percentage is comparatively low.

In the conducted studies, a high number of statements is noticeable, that natural feeding strengthens the emotional bond between the mother and the child. In the research of Cierpka et al. [24] 86.2% of women surveyed refer to breastfeeding as a natural need, and for 96% is an important element of emotional bonding with a newborn baby. Similar results were presented by Jarosz et al.: for 100% of respondents breastfeeding is a natural need and constitutes an important element of emotional bond with the child [25]. Also in the study Klejewski et al. this is a similar percentage - 98% [22]. The results of our own research do not differ significantly from those analyzed, as 95.5% of respondents confirm this relationship.

Among the absolute contraindications to breastfeeding is the classic galactosemia and the inherited lactase deficiency on the part of the child, and on the mother's side HIV infection, HTLV-1 and HTLV-2, active and untreated tuberculosis, the need to use drugs listed as contraindicated during lactation, severe clinical condition of the mother and severe mental illness, preventing the care of the child [2,5,7]. In the case of relative contraindications on the part of the child, it is recommended to express breast milk and give it to children. There are very few indications in clinical practice in which breastfeeding must be permanently or temporarily interrupted. Among the women surveyed, a small part correctly answered questions about contraindications to natural feeding. The most commonly mentioned were HIV infection, severe maternal and cancer disease. The population still has a false belief about the contraindication to breastfeeding during mother's antibiotic therapy, HBV and HCV infection and during breast inflammation [26].

The doctor should have reliable knowledge, allowing for the correct assessment of breastfeeding effectiveness, in order to be able to distinguish situations in which the feeding technique is a problem, from the actual shortage of food. He should also be the most important source of information about breastfeeding. Unfortunately, many studies prove that the situation is quite different. Dzbuk et al. showed that for most women, Internet and television remained the main source of knowledge, which is related to the wide availability of these media [27]. It seems necessary to develop official Internet sources approved by the medical community. Studies by Muszyńska et al. depicted similar trends, listing women's media and magazines among the most important sources [28]. According to Klejewski et al. the most popular sources of knowledge about breastfeeding are books and a guide, midwives, the Internet, the press and television, almost half mentioned family and friends, and the least popular is a birth school, gynecologist and family doctor [22]. In studies by Gebuza et al. respondents in all age groups chose the family and husband as the most important people encouraging breastfeeding. People living in the countryside more often chose a doctor and midwife (76%), and a residents of the city - a family and a husband [29]. Slightly different results show the study by the Cierpka et al. - the most popular source of knowledge about breastfeeding was medical personnel (80%), literature (73%), family and friends (47%) and the media (29%), and only 7% of women did not look for information about feeding the baby [24]. In our own research, among the most frequently indicated

sources of information on breastfeeding were advice provided by healthcare professionals (59.6%), the internet (58.4%) and friends (39.3%).

Nursing mother requires increased supply of energy in the diet by 670kcal / day. The Klejewski et al. [22] depicted that over half of the respondents (60%) knew that mother's food has anti-allergic properties. It has not been proven that the preventive elimination of potentially allergenic ingredients from the mother's diet reduces the percentage of food allergies and atopic diseases in infants [4,30]. Nevertheless, there was a tendency to abandon this type of products among the surveyed women. This issue was analyzed in a study by Jarosz et al. in which women listed products contraindicated in the diet of a breastfeeding mother. 73.1% of the surveyed women marked citrus fruits, 55.5% - flatulence-producing foods, 42.6% - heavy foods, 20.4% - dairy products and spicy foods, 17.6% - drugs, stimulants, and 9.2% knew nothing about it [25]. Analysis of research by Cierpka et al. showed that 97.06% of women surveyed chose starchy foods, 93.14% products causing flatulence, 91.18% spicy foods and the same strong allergens (including citrus fruits, strawberries, chocolate), 89.22% stimulants and only 25.49% indicated milk products [24].

The promotion of natural feeding is very important, which is why numerous initiatives are taken to increase the percentage of breastfeeding mothers. In addition to promotion, it is important to undertake economic and organizational solutions, such as opening milk banks or developing lactation counseling in order to take care of specialists over women who have problems with lactation, and to abandon the use of infant formulas for the benefit of the milk from the milk bank.

In 2013, in a series of The Lancet articles on nutrition for mothers and children, it was established that through natural feeding, the deaths of over 800,000 children could be prevented, and economic savings would amount to about \$ 300 billion a year [15]. The reasons why women avoid or stop breastfeeding include the medical, cultural and psychological spheres. This is a global problem, and this situation has catastrophic consequences for breastfeeding rates and health indicators of subsequent generations. According to Nehring-Gugulska [10], in the conditions of Polish reality, one of the most frequent causes of short breastfeeding is the need for a quick return of a nursing woman to work. It is important to introduce governmental solutions aimed at promoting natural feeding. In the US, women have the right to be paid maternity leave and the Affordable Care Act provides care breaks and insurance coverage for breastfeeding mothers. Such initiatives may increase breastfeeding by 25% [15]. In Norway, thanks to the implementation of the pro-breastfeeding policy and the total promotional campaign breastfeeding rates increased from <30% in 1968 to > 80% in 1991 [31]. In Poland, this is performed, inter alia, by shortening the working time of breastfeeding mothers and providing two additional 30-minute breaks in work. In our study, less than 40% of women declared their intention to continue breastfeeding after returning to work despite the above solutions implemented.

CONCLUSIONS:

1. A surprisingly high proportion of mothers feed their children with infant formula, despite relatively good knowledge of breastfeeding benefits.
2. Women indicate an important need for help from healthcare professionals in the field of breastfeeding education, however a small part of them is satisfied with the scope of information obtained from them.
3. A relevant problem for breastfeeding women is to continue it after returning to work.

4. An important source of knowledge about natural feeding are doctors, midwives and the Internet for women, which is why it is worth focusing on reliable information and promotion campaigns.
5. Breastfeeding women often prophylactically abandon the consumption of foods commonly considered allergenic.

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