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INFLUENCE OF SOCIAL AND MEDICAL FACTORS ON THE DURATION OF EXCLUSIVE BREASTFEEDING

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Summary

The rates of exclusive breastfeeding (EBF) remain low worldwide, with only 36% of children under six months receiving EBF. Recent research indicates that parents are influenced by numerous social and medical factors that affect their decisions regarding infant feeding.

Aim of the study. To analyze the impact of social and medical factors on the success and duration of breastfeeding.

Materials and methods. A survey was conducted among 96 breastfeeding women with varying feeding practices using a Google form. The questionnaire included 24 items covering the woman's age, social status, adherence to breastfeeding support strategies at different stages of medical care, difficulties with breastfeeding, knowledge of the benefits of breastfeeding, the influence of healthcare professionals on feeding decisions, and more. In carrying out scientific work, the basic principles of biomedical research are preserved. Statistical analysis was performed using methods of variation statistics, calculating the mean (*M*) and standard error of the mean (*m*). Correlation analysis was conducted to determine the relationship between variables and to assess its strength and direction. The significance of differences between means was evaluated using Student's *t*-test.

Results. According to the survey, 66.7% of children were exclusively breastfed for up to six months, which aligns with statistical reports from healthcare facilities in Chernivtsi (69.3%, $p > 0.05$). The longest duration of breastfeeding was observed among office workers (18.00 ± 2.27 months) and women without permanent employment (15.00 ± 5.09 months), while the shortest duration was among entrepreneurs (11.14 ± 3.83 months). Among age groups, women aged 31-35 years had the longest breastfeeding duration, while women aged 21-30 years had the shortest. Strong positive correlations were found between breastfeeding duration and participation in breastfeeding education sessions ($r = 0.69$; $p < 0.005$) as well as the woman's social group ($r = 0.73$; $p > 0.005$). Strong negative correlations were observed between breastfeeding duration and the use of infant formula in the first days ($r = -0.62$; $p < 0.005$) as well as difficulties with breastfeeding ($r = -0.70$; $p < 0.005$).

Conclusion. A breastfeeding support strategy requires training for healthcare professionals and women during pregnancy, the initial days in maternity hospitals, and subsequent stages of medical care to prevent difficulties and avoid the discontinuation of breastfeeding.

Keywords: Infant; Breastfeeding; Breast Milk Substitutes; Duration of Breastfeeding.

Introduction

The World Health Organization (WHO) recommends that all children receive exclusive breastfeeding (EBF) for the first six months of life and continue breastfeeding alongside complementary foods for at least two years [1]. However, global rates of exclusive breastfeeding remain low, with only 36% of children under six months receiving EBF [1-4]. Increasing evidence suggests that parents are influenced by various sociocultural factors that impact their feeding decisions [4-6]. Previous international studies have identified several factors associated with mothers' intent to breastfeed exclusively, including a positive attitude toward EBF, perceived social support, prior experience with exclusive breastfeeding, older maternal age, higher education levels, and knowledge of the benefits of exclusive breastfeeding [5-7]. However, there is a lack of evidence in this field, particularly in Ukraine.

Early initiation of breastfeeding, within one hour after birth, provides significant protection for infants against infectious diseases, including gastrointestinal infections. According to WHO data, exclusive breastfeeding significantly reduces the risk of death from diarrhea, pneumonia, and other infectious diseases, and children recover more quickly when they do fall ill [8, 9]. Breastfeeding also helps prevent future serious conditions such as asthma and diabetes [10-12]. Furthermore, children and adolescents who were breastfed are less likely to experience overweight or obesity later in life [12].

Most women decide to breastfeed during the first trimester or even before pregnancy, although some make this decision

later, during pregnancy or after childbirth. The intent to breastfeed is a key factor in its initiation, particularly regarding the duration of exclusive breastfeeding [13-18]. The process of starting and maintaining breastfeeding is highly vulnerable to external influences and social factors, meaning that many women who wish to breastfeed may not be able to do so [19-23]. Nevertheless, this complex process is worthwhile due to the long-term positive health outcomes for the child [24, 25].

Aim of the study. To analyze the influence of social and medical factors on the success and duration of breastfeeding.

Materials and Methods

A survey was conducted among 96 breastfeeding women with varying feeding practices using a Google form. The questionnaire included items such as the woman's age, social status, adherence to breastfeeding support strategies at different stages of medical care, difficulties with breastfeeding, knowledge of the benefits of breastfeeding, and the influence of healthcare professionals on feeding decisions. Statistical analysis was performed using standard methods for calculating relative values and variation statistics, including the mean (*M*) and standard error of the mean (*m*). Correlation analysis was conducted to study and evaluate the relationship between two or more variables, determining the presence, strength, and direction of correlations. The significance of differences between means was assessed using Student's *t*-test.

Results of the Study

According to the survey, 66.7% of children were exclusively breastfed for up to 6 months, 25.0% for up to 2

months, and 8.3% for up to 4 months. These findings align with statistical data from healthcare facilities in Chernivtsi (69.3%, $p > 0.05$) (Fig. 1).

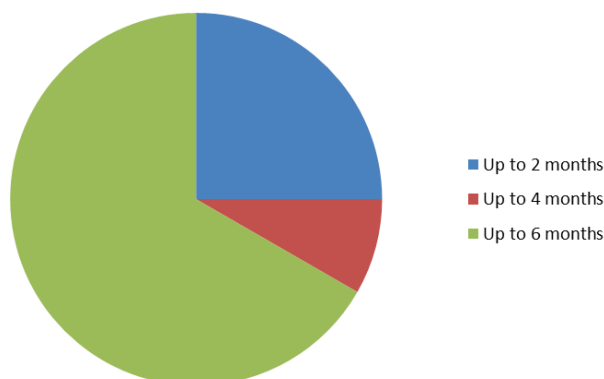


Fig. 1. Duration of exclusive breastfeeding

The most common breastfeeding difficulties were nipple problems (35.7%), lactostasis (21.4%), and weak

sucking (7.1%). 28.6% of women reported no problems with breastfeeding (fig. 2).

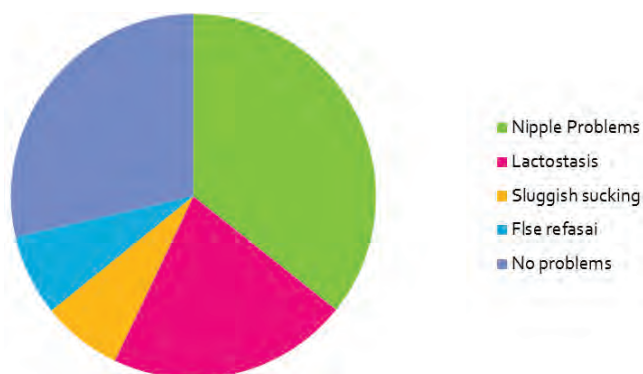


Fig. 2. Most common breastfeeding difficulties.

73.2% of mothers reported that the first breastfeeding occurred within 30-60 minutes after birth. However, 64.3% of women were offered infant formula in the first days. The reasons for using formula included: «perceived lack of milk» in the first days (34.3%), weight loss of the newborn by day 3 (20.0%), infant restlessness (34.3%), nipple problems, and other factors (11.4%).

Additionally, mothers were asked to evaluate the influence of various external figures (nurses, pediatricians, family doctors, friends, and social media) as well as the motivations

that led them to choose breastfeeding. Only 40% of women were satisfied with the information received from their family doctor, and 46.4% were satisfied with the information provided by nurses. The majority of participants (60%) reported obtaining information from social media and other sources.

The longest duration of breastfeeding was observed in office workers and unemployed women, while the shortest was among entrepreneurs (tabl. 1). In age groups, women aged 31-35 years breastfed the longest, while those aged 21-30 years breastfed the least (tabl. 2).

Table 1

Duration of breastfeeding in different social groups of women

Social Group	Duration of Breastfeeding (months) (M±m)
Students	11,57±6,12
Office workers	18,00±2,27
Entrepreneurs	11,14±3,83
Unemployed	15,00±5,09

Table 2

Duration of breastfeeding in different age groups of women

Age Group	Duration of Breastfeeding (months) (M±m)
Under 20 years	8,04±4,91
21-30 years	4,76±3,89
31-35 years	18,0±0,00
Over 35 years	9,26±5,24

Correlation analysis was conducted to examine the relationship between various factors and the duration of breastfeeding. The results revealed the following: strong positive correlations were found between breastfeeding duration and the following factors: participation in breastfeeding education sessions ($r = 0.69$; $p < 0.005$). The woman's social group ($r = 0.73$; $p > 0.005$). Moderate positive correlations were observed between breastfeeding duration and: satisfaction with the information received from the family doctor ($r = 0.42$; $p > 0.005$). The woman's age group ($r = 0.47$; $p < 0.005$). Strong negative correlations were

identified between breastfeeding duration and the use of infant formula in the first days ($r = -0.62$; $p < 0.005$). Difficulties with breastfeeding ($r = -0.70$; $p < 0.005$) (Table 3).

The duration of breastfeeding was negatively influenced by early difficulties, such as nipple problems and the use of milk substitutes. Positive factors associated with longer breastfeeding duration included adherence to modern early breastfeeding practices (initiation within the first 30-60 minutes after birth), rooming-in, and participation in breastfeeding education. The presence of lactostasis did not significantly affect breastfeeding duration.

Table 3

Correlation analysis of factors affecting breastfeeding duration

Factor	Lactation Problems	Adequate Weight Gain	Duration of Breastfeeding Use of Milk Substitutes	Use of Milk Substitutes
Age of the Woman	$r = -0,3^*$	$r = 0,3$	$r = 0,47^*$	$r = 0,1$
Social Group	$r = -0,5^*$	$r = 0,1$	$r = 0,73$	$r = 0,02$
Breastfeeding education	$r = -0,2$	$r = 0,1$	$r = 0,69^*$	$r = -0,2$
Breastfeeding Difficulties	$r = -0,2^*$	$r = 0,2$	$r = -0,70^*$	$r = -0,2$
Satisfaction with Family Doctor's Info	$r = -0,4$	$r = 0,2$	$r = 0,42$	$r = -0,1$
Use of Milk Substitutes in the First Days	$r = 0,95$	$r = 0,1$	$r = -0,62^*$	-

* $p < 0,05$.

Table 4

Duration of breastfeeding (months) based on factors

Factor	Yes	No	Probability of difference
Breastfeeding Education	13,71±5,53	11,08±4,37	$p > 0,05$
Nipple Problems	8,70±3,47	16,0±4,06	$p < 0,05$
Lactostasis	15,86±5,12	7,64±5,24	$p < 0,05$
Use of Milk Substitutes in the First Days	9,5±6,62	13,33±5,71	$p < 0,05$
Early Breastfeeding	14,83±4,89	8,69±5,53	$p < 0,05$
Rooming-in	14,83±4,89	8,69±5,53	$p < 0,05$

A multifactorial analysis was conducted, including all variables potentially related to breastfeeding decisions. Five factors were identified as significantly associated with the prenatal decision to breastfeed: 1. Breastfeeding training: Women who attended breastfeeding training were twice as likely to breastfeed (OR: 1.32-3.34; 95% CI) compared to those who did not receive training. 2. Previous breastfeeding experience: Women with prior breastfeeding experience were significantly more likely to intend to breastfeed (OR: 3.46-14.10; 95% CI). 3. Partner support: Women who received support from their partner were 1.5 times more likely to breastfeed (OR: 1.09-2.28; 95% CI) compared to those without such support.

Conclusions

Numerous factors, including social, demographic, and medical influences, affect a woman's decision to breastfeed and the duration of breastfeeding.

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ВПЛИВ СОЦІАЛЬНИХ ТА МЕДИЧНИХ ФАКТОРІВ НА ТРИВАЛІСТЬ ГРУДНОГО ВИГОДОВУВАННЯ

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Резюме.

Обсяги виключно грудного вигодовування залишаються низькими у всьому світі. Лише 36% дітей віком до 6 місяців отримують виключно грудне вигодовування. Все більше досліджень показують, що батьки знаходяться під впливом багатьох соціальних та медичних факторів, які впливають на рішення про годування дитини.

Мета дослідження – проаналізувати вплив соціальних і медичних факторів на успішність та тривалість грудного вигодовування.

Матеріал та методи дослідження. Проведено опитування 96 жінок-годувальниць з різними видами вигодовування дитини за допомогою створеної Google форми. Питання анкети включали 24 пункти: вік жінки, соціальний статус, дотримання стратегії

підтримки грудного вигодовування на різних етапах медичного супроводу, труднощі прикладання до грудей, знання переваг грудного вигодовування, вплив медичних працівників на рішення щодо вигодовування, тощо. При виконанні наукової роботи передбачено збереження основних принципів щодо проведення біомедичних досліджень. Статистичну обробку результатів дослідження проводили за допомогою методів варіаційної статистики, вираховували середню арифметичну вибірки (M), стандартну помилку середньої арифметичної (m). Проведено кореляційний аналіз, визначили, чи існує взаємозв'язок між змінними, а також оцінили його силу та напрямком. При оцінці значимості різниці між середніми величинами вираховували t-критерій Стьюдента.

Результати. За даними активного опитування матерів, 66,7% дітей вигодовувались до 6 місяців грудним молоком, що відповідає даним статистичних звітів закладів у м. Чернівцях (69,3%, $p > 0,05$). Найбільша тривалість грудного вигодовування спостерігалась у групі службовців (18,00±2,27 міс.) та жінок без постійного місця роботи (15,00±5,09 міс.), найменша – у жінок підприємців (11,14±3,83 міс.). У вікових групах жінок тривалість грудного вигодовування була більшою у жінок 31-35 років, найменшою – 21-30 років. Сильні позитивні кореляційні зв'язки існують між тривалістю грудного вигодовування та наявністю навчання з питань грудного вигодовування ($r=0,69$; $p < 0,005$), соціальною групою жінки ($r=0,73$; $p > 0,005$), сильні негативні кореляції виявлено між тривалістю грудного вигодовування та використанням заміників грудного молока у перші доби ($r=-0,62$; $p < 0,005$), труднощами прикладання до грудей ($r=-0,70$; $p < 0,005$).

Висновок. Стратегія підтримки грудного вигодовування потребує навчання медичних працівників та жінок на етапах вагітності, перших днів перебування в пологових стаціонарах та подальших етапах медичного супроводу для уникнення проблем та відмови від грудного вигодовування.

Ключові слова: немовля; грудне вигодовування; заміники грудного молока; тривалість грудного вигодовування.

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