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ORIGINAL PAPER

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# Breastfeeding Promotion and the Results of the Maternity Ward – a Friend of Children Initiative Implementation in Bjelovar-Bilogora County in 2018

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## ABSTRACT

**Background:** Breastfeeding has a beneficial effect on the overall health system of the child and the mother. After six months of age, it is recommended to introduce complementary feeding in parallel and to continue breastfeeding for at least one year of the child's life. Maternal education is one of the key tasks of medical staff during pregnancy and especially during lactation. **Objective:** The main objectives of the study is to determine the essential features of female respondents with regard to previous pregnancies, births and health visitors visits after birth; to determine the percentage of women whose lactation was started in hospital and who exclusively breastfed; to determine the differences in child's diet during a health visitor visit at two, four, six, nine and twelve months in regards to female respondents' age. **Methods:** The study has been conducted as a cross-sectional study. 571 women who gave birth in General Hospital of Bjelovar took part in the survey and the reviewing was continued by Health Visiting Service of Bjelovar-Bilogora County in 2018. The tools for data collection were IT system of General Hospital of Bjelovar, case histories as well as Health Visiting Service IT system. **Results:** Most of the female respondents are of the average age of 30 years. The study was conducted on a highly educated sample. 461 respondents have a certain form of education. Older respondents are considerably more educated (62 %). Single respondents and extramarital respondents are considerably of younger age. Older respondents predominantly live in the

town, have more previous pregnancies and children compared to younger respondents. Lactation was started with 98.8 % respondents in hospital, and 96.7 % exclusively breastfed. The mothers of older ages breastfeed longer. **Conclusion:** Older, educated, employed, married, town residential female respondents decide upon breastfeeding and exclusively breastfeeding. Older respondents have more experience with previous pregnancies and lactation. The study has confirmed that older mothers breastfeed longer, while younger mothers more often reach for milk alternatives.

**Keywords:** breastfeeding, birth, pregnancy.

## 1. BACKGROUND

Breastfeeding has a beneficial effect on the overall health system of the child and the mother. After six months of age, it is recommended to introduce complementary feeding in parallel and to continue breastfeeding for at least one year of the child's life. Maternal education is one of the key tasks of medical staff during pregnancy and especially during lactation. That stands out clearly and significantly in order to prevent possible problems and complications related to breastfeeding itself and directly contributes to the quality of the "Maternity ward—a friend of children" programme.

According to the recommendations of the World Health Organization and UNICEF, it is recommended to do the first breastfeeding within the "golden hour", i.e., 60 minutes after

delivery. To emphasize the importance of breastfeeding, in 2002 the World Health Organization and UNICEF adopted a joint document setting out all the parameters that emphasize the optimal nutrition of infants and young children. To improve breastfeeding, various programmes have been designed. Certainly one of the most prominent is the “Maternity ward—a friend of children” programme. The programme has been implemented at the World Health Organization and UNICEF since 1992. It is based on the encouragement and implementation of breastfeeding within the maternity hospital, and it is implemented under the slogan “Ten steps to successful breastfeeding”. Also, the practice of “rooming in” stands out. It is a programme that aims to ensure the physical connection of family and mother with the new situation, and to establish the rhythm and technique of breastfeeding in a way that allows mothers and children to stay together for 24 hours. This programme allows mothers to breastfeed on demand. It is necessary to educate how mothers feed their children and how long each breastfeeding must last. Mothers should also be encouraged to connect with breastfeeding support groups in their areas of origin. In this way, breastfeeding help and advice is available to mothers. Protection, promotion and support of breastfeeding within the Republic of Croatia refers to the implementation of the programme “Maternity hospital—a friend of children”, through community health care for pregnant women and mothers, through the implementation of the programme “Counselling for children—friends of breastfeeding”; implementation of the programme “Communities—Friends of Breastfeeding”, activities of breastfeeding support groups of the Croatian Association of Breastfeeding Support Groups. The first mentioned “Maternity ward—a friend of children” was implemented in Croatia three years after the world implementation, i.e., in 1996. Twenty years later, all maternity hospitals within the Republic of Croatia acquired this name. As a consequence of the implementation of this programme, there is an increase in the number of breastfed children within the maternity hospital, and also an increase in exclusively breastfed children in the first months (1-7).

In the area of Bjelovar and Bjelovar-Bilogora County, breastfeeding promotion programmes have been implemented for many years, with a large role played by Dr. Marija Čatipović, whose paediatric practice bears the prestigious title—“Counselling for children—a friend of breastfeeding.” In 2004, Dr. Čatipović founded the association “For a Happy Childhood”, which is responsible for helping parents and children in overcoming educational and health difficulties. The Health Visiting Service in Bjelovar also has a great deal of credit for promoting breastfeeding, especially the health visitors who have been conducting pregnancy courses since 2002 and leading fifteen breastfeeding promotion groups. Once a week, the visiting nurses go to the Bjelovar Hospital Maternity Ward, where they talk to mothers in order to better inform, educate and prepare them for the new situation. In 2012, the Bjelovar maternity hospital also acquired the name “Maternity hospital – a friend of children”. Bjelovar-Bilogora County is the first Croatian county to bear the title of “Breastfeeding Friendly County”. The Children’s Department of the National Library “Petar Preradović”

Bjelovar bears the title “Library—a friend of breastfeeding”, Pharmacy Bjelovar is “Pharmacy—a friend of breastfeeding”, Kindergarten Ciciban in Bjelovar is entitled “Kindergarten—a friend of children”. In 2017, the town of Bjelovar received the first “Mother’s Bench” and every year in the town and Bjelovar-Bilogora County, the International and National Breastfeeding Week is celebrated in order to encourage and promote breastfeeding. Bjelovar and the Bjelovar-Bilogora small county are in the lead in the Republic of Croatia in terms of the implementation of actions related to breastfeeding, mothers, children and the family in general (8-14).

## 2. OBJECTIVE

The main objectives of the study is to determine the essential features of female respondents with regard to previous pregnancies, births and health visitors visits after birth; to determine the percentage of women whose lactation was started in hospital and who exclusively breastfed; to determine the differences in child’s diet during a health visitor visit at two, four, six, nine and twelve months in regards to female respondents’ age.

## 3. RESPONDENTS AND METHODS

### 3.1. Respondents

Respondents in the study are women who gave birth in the Maternity Unit of the Department of Gynecology and Obstetrics of the General Hospital Bjelovar in the period from 1 January 2018 to 31 December 2018, and after discharge from the hospital were reviewed by health visitors of the Health Center Bjelovar-Bilogora County. The study included data for 571 women aged 17 to 44 years. Data collection was conducted in the period between May 3, 2019 and June 30, 2019.

### 3.2. Methods

The data were collected retrogradely. The source of data was the Hospital Information System (BIS) of the General Hospital Bjelovar and medical history of the Department of Gynecology and Obstetrics of the General Hospital Bjelovar and data in the information system and health records of the Health Visiting Service of the Bjelovar-Bilogora County Health Center Bjelovar, Čazma, Berek, Ivanska, Veliki Grđevac, Garešnica, Grubišno Polje and Daruvar. In order to facilitate data collection, the questionnaire attached to the paper was used. The questionnaire consisted of two parts. The questions in the first part of the questionnaire collected socio-demographic data on the respondents and data on the experience of the respondents’ stay in the maternity ward of the Department of Gynaecology and Obstetrics of the General Hospital Bjelovar. The first five questions are closed-ended questions about age, occupation, employment status, marital status, and residence. The other ten questions relate to the course of pregnancy, the newborn, lactation, and the number of days spent in the hospital. The second part of the questionnaire, i.e., the next fourteen questions, refer to the frequency of visits by health visitors after discharge from the maternity hospital, and the nutrition of a child up to twelve months of age.

The research was approved by the J. J. Strossmayer University of Osijek at the Faculty of Medicine in Osijek. The research was also approved by the Ethics Committee of the

	Number (%) of respondents in relation to age				Total	p*
	up to 25	26 - 30	31 - 35	36 and more		
<b>Level of education</b>						
No completed primary school	1 (0,7)	1 (0,6)	0	0	2 (0,4)	
Elementary school	48 (32,4)	27 (16,1)	16 (10,1)	16 (16,8)	107 (18,8)	
High school	94 (63,5)	116 (69)	92 (57,9)	48 (50,5)	350 (61,4)	< 0,001
College	5 (3,4)	15 (9)	24 (15,1)	10 (10,5)	54 (9,5)	
University degree	0	9 (5,4)	27 (17)	21 (22,1)	57 (10)	
<b>Working status</b>						
Employed	34 (23)	78 (46,4)	99 (62,3)	52 (54,7)	263 (46,1)	< 0,001 <sup>†</sup>
Unemployed	114 (77)	90 (53,6)	60 (37,7)	43 (45,3)	307 (53,9)	
<b>Marital status</b>						
Unmarried	57 (38,5)	24 (14,3)	27 (17)	13 (13,7)	121 (21,2)	
Married	71 (48)	129 (76,8)	123 (77,4)	70 (73,7)	393 (68,9)	< 0,001 <sup>†</sup>
Extramarital status	20 (13,5)	15 (8,9)	9 (5,7)	10 (10,5)	54 (9,5)	
Divorced	0	0	0	2 (2,1)	2 (0,4)	
<b>Place of residence</b>						
Town	47 (31,8)	60 (35,7)	86 (54,1)	50 (52,6)	243 (42,6)	< 0,001
Village	101 (68,2)	108 (64,3)	73 (45,9)	45 (47,4)	327 (57,4)	
Total	148 (25,96)	168 (29,47)	159 (27,89)	95 (16,67)	570 (100)	

Table 1. Basic characteristics of respondents in relation to age \*Fisher's exact test; † $\chi^2$  test

	Median (interquartile range) in relation to age				Total	p*
	up to 25	26 - 30	31 - 35	36 and more		
Number of pregnancies	1 (1 - 2)	2 (2 - 3)	2 (1 - 3)	3 (2 - 4)	2 (1 - 3)	<0,001
Number of live births from previous pregnancies	0 (0 - 1)	1 (0 - 2)	1 (0 - 2)	1 (1 - 2)	1 (0 - 2)	<0,001
Number of previously breastfed children	0 (0 - 1)	1 (0 - 2)	1 (0 - 2)	1 (1 - 2)	1 (0 - 2)	<0,001
Number of days spent in hospital	5 (3 - 7)	4 (3 - 6)	4 (3 - 6)	4 (3 - 7)	4 (3 - 6)	0,56
Number of health visitors reviews during the first month	7 (5 - 8)	6 (5 - 8)	7 (5 - 8)	6 (5 - 8)	6 (5 - 8)	0,75

Table 2. Characteristics of the respondents related to past pregnancies, births, and the number of visits by a health visitor during the first month after birth \*Kruskal's Wallis test

General Hospital Bjelovar. The research was conducted in accordance with ethical and scientific standards, within the framework of fundamental ethical principles and human rights. Data were collected in compliance with the Personal Data Protection Act.

**Statistical analysis**

Category data are presented in absolute and relative frequencies. Differences of categorical variables were tested by  $\chi^2$  test, and if necessary by Fisher's exact test. The normality of the distribution of numerical variables was tested by Shapiro-Wilk test. Numerical data were described by median and interquartile range limits, and differences of numerical variables by age groups by Kruskal Wallis test. All P values are two-sided. The significance level was set to Alpha = 0.05. MedCalc Statistical Software version 18.11.3 (MedCalc Software bvba, Ostend, Belgium; <https://www.medcalc.org>; 2019) was used for statistical analysis.

**4. RESULTS**

The study was conducted on 571 female respondents of arithmetic means aged 30 years (with a standard deviation

of 6 years) ranging from a minimum of 17 to a maximum of 44 years. Most respondents were between 26 and 30 years of age. The age groups of the respondents differed statistically significantly according to the level of education ( $p < 0.001$ ). (61.4%) respondents completed secondary school, and significantly more respondents aged 26 to 30. Significantly more respondents under the age of 25 (18.8%) completed only primary school.

The age groups of the respondents differed statistically significantly in terms of work status ( $p < 0.001$ ). There were significantly more employed respondents (46.1%) aged 31 to 35, while significantly more unemployed respondents aged up to 25 (Table 1).

Regarding marital status, (21.2%) respondents are unmarried, (68.9%) respondents are married, (9.5%) live in an extramarital union and two (0.4%) are divorced. Unmarried or in an extramarital relationship are significantly more respondents up to the age of 25. The age groups of the subjects differed statistically significantly according to marital status (Fisher's exact test,  $P < 0.001$ ) (Table 1). (42.6%) respondents live in the town, and (57.4%) in the

	Number (%) of respondents in relation to age				Total	P*
	up to 25	26 - 30	31 - 35	36 and more		
<b>Mode of delivery</b>						
Sp. vaginal	96 (64,9)	123 (73,2)	109 (68,6)	62 (65,3)	390 (68,4)	0,47
Induced	12 (8,1)	13 (7,7)	14 (8,8)	5 (5,3)	44 (7,7)	
Cesarean section	40 (27)	32 (19)	36 (22,6)	28 (29,5)	136 (23,9)	
<b>Delivery</b>						
Singleton	147 (99,3)	167 (99,4)	156 (98,1)	92 (96,8)	562 (98,6)	0,29
Multiple	1 (0,7)	1 (0,6)	3 (1,9)	3 (3,2)	8 (1,4)	
<b>Newborn</b>						
Full-term	141 (95,3)	162 (96,4)	152 (95,6)	89 (93,7)	544 (95,4)	0,82
Hypotrophic	3 (2)	1 (0,6)	2 (1,3)	3 (3,2)	9 (1,6)	
Pre-term	4 (2,7)	5 (3)	5 (3,1)	3 (3,2)	17 (3)	
<b>The sex of the newborn</b>						
Male	77 (52)	94 (56)	77 (48,4)	47 (49,5)	295 (51,8)	0,55
Female	71 (48)	74 (44)	82 (51,6)	48 (50,5)	275 (48,2)	
<b>Establishment of lactation during hospitalization</b>						
Yes	145 (98)	166 (98,8)	157 (98,7)	95 (100)	563 (98,8)	0,58
No	3 (2)	2 (1,2)	2 (1,3)	0	7 (1,2)	
<b>Type of nutrition of the newborn</b>						
Breastfeeding	142 (95,9)	160 (95,2)	155 (97,5)	94 (98,9)	551 (96,7)	0,37
Complementary food	6 (4,1)	8 (4,8)	4 (2,5)	1 (1,1)	19 (3,3)	

Table 3. Characteristics related to childbirth and lactation in relation to the age of respondents \*  $\chi^2$  test

countryside. Older respondents are significantly more from the town, and younger respondents are significantly more from the rural area (Fisher’s exact test,  $P < 0.001$ ) (Table 1).

The research shows that older women have significantly more pregnancies, 3 of them (2-4). The number of live births from previous pregnancies is 1 (0-2), and the number of previously breastfed children is also 1 (0-2). Respondents aged 36 and over have significantly more previously breastfed children. The subjects spent an average of 4 days (3-6) in hospital without significant differences in the age of the subjects (Table 2). As many as (74.4%) children had an Apgar score of 10/10, and there were (68.4%) spontaneous vaginal births, a total of 571 births, of which (98.6%) were single births. (95.4%) respondents gave birth to full-term babies out of which (51.8%) were male. Lactation was established during the hospital stay in (98.8%) respondents and (96.7%) newborns were exclusively breast milk fed (Table 3).

It is evident from the obtained data that the health visitors visited the mother and the newborn within 24 hours after discharge from the hospital in (77.3%) cases. At the first review (71.4%) respondents exclusively breastfed, while formula was provided by (15.1%) respondents. The combined diet related to breastfeeding and formula was carried out by (13.4%) respondents. The type of diet of the newborn has no significant difference compared to the age of the respondents (Table 4).

During the visit of the health visitor after two months of the child’s life (74.5%) children were breastfed, while (59.9%) children were exclusively breastfed. There is a significantly larger difference in older mothers, while younger mothers more often bottle fed their babies.

At the age of nine months, most children consume and

/ or formula and age appropriate solid foods in addition to breastfeeding. Going to the field, the health visitor determined that (54.4%) children were breastfed, of which 44.6% were exclusively breastfed. (55.4%) of children were fed with formula and complementary solid foods, while breastfeeding and solid foods are present in (55.4%) children. There is also no significant difference in maternal age.

During the visit by the health visitor it was found that a twelve-month-old infant out of a total of eight children born on January 1, 2018, 4 out of 8 of them were still breastfed, and no child’s diet consisted of exclusive breastfeeding. Four out of eight children were on a combination of formula and solid foods and the same number of children on a combination of breastfeeding and age appropriate solid foods.

### 5. DISCUSSION

Among the socio-demographic data, it can be seen that most of the respondents were between the ages of 26 and 30, as many as 168 (29.4%). 350 (61.4%) respondents completed high school, mostly respondents aged 26 to 30, 116 of them (69%). 107 (18.8%) respondents had only elementary school education, while 111 (19.5%) respondents were highly educated. There were 263 employed respondents in this survey (46.1%) and this is the highest number of employed respondents aged 31 to 35 years, as many as 99 (62%). Considering the marital status, there are 121 unmarried respondents (21.2%), 393 of them are married (68.9%), 54 (9.5%) respondents live in an extramarital union, while two respondents (0, 4%) are divorced. The majority of unmarried respondents in the extramarital union were in the under-25 group, 77 of them (52%). 243 (42.6%) respondents live in the town, while 327 (57.4%) live in the countryside.

	Number (%) of respondents in relation to age				Total	P*
	up to 25	26 - 30	31 - 35	36 and more		
Visit of the health visitor within 24 hours after discharge from the maternity ward						
Yes	93 (73,8)	111 (77,1)	105 (81,4)	59 (76,6)	368 (77,3)	0,55
No	33 (26,2)	33 (22,9)	24 (18,6)	18 (23,4)	108 (22,7)	
Total	126 (100)	144 (100)	129 (100)	77 (100)	476 (100)	
The type of newborn's diet when coming home						
Breastfeeding	85 (67,5)	96 (66,7)	96 (74,4)	63 (81,8)	340 (71,4)	0,19
Formula milk	19 (15,1)	28 (19,4)	17 (13,2)	8 (10,4)	72 (15,1)	
breastfeeding + formula milk	22 (17,5)	20 (13,9)	16 (12,4)	6 (7,8)	64 (13,4)	
Total	126 (100)	144 (100)	129 (100)	77 (100)	476 (100)	

Table 4. Visit of a health visitor within 24 hours after discharge from hospital and the nutrition of a newborn in the relation to the age of the respondents \* $\chi^2$  test

The research shows that we find more pregnancies in the group of older respondents, on average 3. The number of live births from previous pregnancies is 1 (0-2), and the number of previously breastfed children is also 1 (0-2). Respondents aged 36 and over had the most previously breastfed children. The respondents spent an average of 4 days in hospital (3-6) without significant differences in their age (Table 2). As many as 425 (74.4%) children had an Apgar score of 10/10, and there were 390 spontaneous vaginal births (68.4%), a total of 571 births, of which 562 (98.6%) were single births. The newborn was born at term, i.e., the full-term newborn with 544 (95.4%) respondents and 295 of them (51.8%) were male (Table 3).

Lactation was established during the hospital stay with 563 (98.8%) respondents and 551 (96.7%) newborns were exclusively breastfed. Such a result was contributed by the educated staff of the maternity hospital, which has been known as the "Maternity Hospital - a friend of children" since 2012 (Table 3). The second part of the questionnaire referred to the Bjelovar-Bilogora County Health Visitor Service, i.e., the number of reviews by the health visitor 24 hours after the discharge of the mother and newborn from hospital, the number of reviews within the first month of age, and the type of infant diet during reviews at 2, 4, 6, 9, and 12 months of the child's age.

It is evident from the obtained data that the health visitor reviewed the mother and the newborn within 24 hours after discharge from hospital in 368 (77.3%) cases. At the first review, 340 (71.4%) women exclusively breastfed, while 72 (15.1%) women bottle fed their newborns. The combined diet related to breastfeeding and formula was provided by 64 (13.4%) respondents. The type of diet of the newborn does not differ significantly from the age of the respondents (Table 4). The results of the research in the Specialist Paediatric Clinic of Dr. Čatipović from 1995 on a sample of 207 newborns, show that 63% of children were breastfed in infancy (15). Čatipović brings the results of a 2010 survey on a sample of 184 children, where it was recorded that 90% of mothers breastfed during the first month of a child's life (15). This study shows an improvement compared to 1995, but a decrease in the share of breastfeeding is visible in our study compared to Dr. Čatipović's 2010 survey (15).

During the first month of the child's life, the health visi-

tor reviewed the mother and the newborn six times (5-8), where no significant difference in the number of reviews compared to the mother's age was visible.

During the review of the health visitor after two months of the infant's life, 306 (74.5%) of them were breastfed, while 246 (59.9%) infants were exclusively breastfed. There was a significantly larger difference in older mothers, while younger mothers were more likely to resort to formula milk. Dr. Čatipović's research from 1995 showed that 44% of mothers breastfed at the infant's age of two months (15). In the 2010 Čatipović study, the results show that 73% of mothers breastfed three months after giving birth (15). In this study a significant difference is visible in relation to 1995, while the difference with 2010 is almost imperceptible (15).

During the review of the health visitor after four months of the infant's life, 221 (64.8%) infants were breastfed, while 155 (45.6%) of them were exclusively breastfed, and also breastfed children were children of older mothers.

At the age of six months, the health visitor determined that 147 (57.9%) infants were breastfed and 14 (5.6%) were exclusively breastfed, which is an extremely poor result in relation to all actions taken in Bjelovar-Bilogora County and initiatives to promote breastfeeding. It was found that 102 (40.5%) infants are fed with formula milk and solid foods, and the combination of breastfeeding and solid foods is present in 136 (54%) infants aged six months. In 1995, Čatipović found in her research that 17% of newborns were breastfed six months after birth, while the results from 2010 brought an improvement, so that then almost 51% of newborns were breastfed at six months (15).

At the age of nine months, most children consume and/or formula and age appropriate solid foods in addition to breastfeeding. During the review the health visitor determined that 62 (54.4%) children were breastfed, of which 50 (44.6%) children were exclusively breastfed. Formula milk and solid foods are consumed by 62 (55.4%) children, while breastfeeding and solid foods are present with 62 (55.4%) infants. There is also no significant difference in maternal age. In Dr. Čatipović's 1995 paper, only 5% of nine-month-old infants were breastfed, which is significantly less than our results (15). During the health visitor review of a twelve-month-old infant out of a total of eight children born on

January 1, 2018, 4 of them were still breastfed; no child's diet consisted of exclusive breastfeeding. Four out of eight children were on a combination of formula milk and solid foods and the same number of children on a combination of breastfeeding and age appropriate solid foods. In the work of Dr. Čatipović from 1995, only 2% of children aged twelve months were breastfed, while in 2010 this percentage went up to 42% (15).

Also, a study conducted by paediatricians in 2007 in 22 specialist paediatric surgeries throughout the Republic of Croatia resulted in devastating results showing that as many as 50% of mothers give up breastfeeding after the first month of their infant's life, and only 13.4% of mothers breastfeed for up to six months (15). Comparing the survey then with the survey now, it is obvious that the results of present survey are much better compared to 2007. Breastfed infants during the first month of life were 84.4%, which is an excellent result considering the comparison with the result of the 2007 survey. Furthermore, at the infant's age of six months, 57.9% of respondents in this study breastfed, which is a great improvement compared to the results of the survey not so long ago in 2007 (5).

Our research is confirmed by Jaafar et al (16) in 2010, who found a significantly higher percentage of children breastfed in the Rooming-in programme, compared to children separated from their mothers (16). The high proportion of breastfed children on discharge is also slightly better than the results obtained in 2016 study by Jaafara et al (17), where they verified 86% of women who breastfed on discharge (17).

It is certain that the support of a partner is also very important for breastfeeding, and Hildingsson and participants (18) in a 2008 Swedish national study kept tracks of 2430 women for a year and two months after giving birth. The study found 5% of women who were dissatisfied with their partner's support in early pregnancy. In doing so, it was found that women who are dissatisfied with their partner's support are more likely to develop depressive symptoms. The mentioned group of women also records a higher divorce rate, especially in the case of insufficient participation and understanding of their partners in the child care and household chores (18).

The importance of breastfeeding and the "Maternity Ward – a friend of children" (BFHI) programme in the Republic of Croatia is best illustrated by Grgurić et al (19), who state that from the launch of the programme in 1993 to 2003, 15 Croatian maternity hospitals received the mentioned name. In the Republic of Croatia, every maternity ward holds this prestigious title today. The results are particularly impressive, especially after a series of difficulties, and the great efforts made by the organizers between 2007 and 2015 have resulted in great progress in the promotion of breastfeeding in Croatia. Grgurić et al state that exclusive breastfeeding rates increased by 16% in the period from 0 to 2 months (from 51% in 2007 to 67% in 2014) and by 14% in the period from 3 to 5 months (from 32% in 2007) to 46% in 2014) (19).

Pavičić Bošnjak et al (20) in their 2012 study processed a sample of 190 mothers who breastfed newborns in the BFHI programme. In doing so, the obtained results indicate a significantly longer duration of breastfeeding in women in-

cluded in the programme, especially in the period between one month and six months after delivery (20).

Education and enlightenment are of special importance for the promotion of breastfeeding as well as for increasing the share of breastfeeding among maternal population. In the mentioned area, the importance of certified and educated breastfeeding counsellors (IBCLC) is especially emphasized and confirmed by Zakarija-Grković et al. in their research from 2019 (21). The importance of breastfeeding counsellors (IBCLC) in the world and in the Republic of Croatia is exceptional, which is especially visible in recent years with an increase in the number of certified and educated breastfeeding counselors (21).

In the study conducted by Gomez-Pomar et al (22) in 2018, the authors point out that there is no doubt about the multiple benefits of breastfeeding. They recall how the WHO and UNICEF developed the "Ten Steps to Successful Breastfeeding" in 1992, which became the backbone of the "Maternity Ward – a friend of children" initiative (BFHI). In doing so, the authors emphasize the great value of programmes to promote breastfeeding worldwide (22).

Lubbe et al (23) emphasize the great importance of the BFHI programme to promote breastfeeding and the importance of breast milk in the growth and development of newborns. At the same time, a very critical review of the use of pacifiers and its detrimental effect on the length and frequency of breastfeeding was presented, and the authors conclude that this practice should be avoided (23).

## 6. CONCLUSION

Education (or education in adolescence and during pregnancy) provides better information about the birth itself and in the postpartum period, which includes the infant's nutrition, and knowledge of what is best for mother and child. Breastfeeding, economically speaking, leads to significant savings in the household budget. Breastfeeding is, in a word, economically viable if a mother decides to exclusively breastfeed her child for 6 months. There are more unemployed respondents under the age of 25, which would indicate that, although awareness of contraception has been raised to an enviable level, in today's modern world, where various sources of information are available, there are unplanned pregnancies that cause one or more members of the household are unemployed and the existential issue may be jeopardized. Pregnancies are largely unplanned. Older respondents live more often in the town, while younger ones are more stationed in rural areas. In the past, it was a common opinion that women from the village exclusively breastfed or breastfed longer than mothers from the town. This opinion was reached because people in rural areas used to live in large families, often several generations together that educated young mothers on how and in what way to breastfeed for as long as possible. Today, that is no longer the case. More and more young married couples are opting for an independent community either in towns or in rural areas.

The second part of the survey questions and data collected related to past pregnancies, births, and current birth, newborn, establishment of lactation, nutrition of the newborn during hospitalization and the number of days spent

by the mother and newborn in the hospital.

Lactation was established during the hospital stay with 563 (98.8%) respondents and 551 (96.7%) newborns were exclusively breastfed. I think that the educated staff of the maternity hospital, which has been known as the “Maternity Hospital - a friend of children” since 2012, has greatly contributed to such a result.

There is a large difference in the percentage of breastfed children aged six months compared to 1995, while the difference in the percentage of breastfed children compared to 2010 is almost identical. This research showed that the results for the share of children breastfed at the age of twelve months are almost 50%, which is a better result compared to the research done in 1995 and 2010.

The research confirms the value of breastfeeding and breast milk, and gives an additional impetus to the further popularization of breastfeeding culture and the project named “Maternity ward- a friend of mothers”.

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