

**THE BREASTFEEDING EDUCATION FOR STUDENTS OF THE FACULTY OF PHARMACY
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ABSTRACT

The aim of the study was to examine the knowledge, attitudes and intentions of the students of the Faculty of Pharmacy and Chemistry and the effectiveness of structured breastfeeding education on positive changes. The research was carried out as part of the "Breastfeeding Friends Universities and Polytechnics" and "Breastfeeding Friendship Pharmacies" projects. The experimental group consisted of 27 students of the Faculty of Pharmacy and Biochemistry in Zagreb, year 5, and a control group of 30 students at the Polytechnic of Bjelovar, nursing course, year I. A structured breastfeeding training was carried out with the experimental group, which is part of the course "Friends of Breastfeeding Pharmacies". Testing the normality of the distribution of results and the impact of outliers allowed the use of parametric statistical procedures. Results The paired samples t-test confirmed the positive effects of education in the experimental group, the total score on the BIAKQ questionnaire improved by 79.48 points ($t(26) = 25.24$, $p = 0.00$). However, even after the education with intentions ($t(55) = 0.57$, $p = 0.57$) and the total results ($t(55) = -1.55$, $p = 0.13$) on the BIAKQ questionnaire, students of the experimental group did not achieve statistically significantly better results compared to control group. A one-time, even several-day education consisting of lectures and workshops is sufficient to improve the intentions, attitudes and knowledge of pharmacy students, but to equate with the level of intentions and overall results on the BIAKQ questionnaire of other health professionals (nursing students), longer continuing education is required. Weak correlation after knowledge education with attitudes ($r(25) = -0.06$, $p < 0.05$) and intentions ($r(25) = -0.00$, $p < 0.05$) and overall results ($r(25) = -0.00$, $p < 0.05$). points to the conclusion that changes in intention and attitude are conditioned by action and other factors, not just by a change in knowledge.

KEYWORDS: breastfeeding, education.**INTRODUCTION**

The importance of breastfeeding education stems from the importance of breastfeeding and the benefits that breastfeeding brings to the mother and child.^[1] The authors have done more research on breastfeeding education targeting high school students.^[2,3] There are no papers in the literature addressing the effects of breastfeeding education on pharmacists' attitudes. A possible reason why pharmacists, although healthcare professionals, have not been involved so far in breastfeeding education is to identify the work of pharmacists with the work of the industry involved in the production of breast milk substitutes. It is a fact that different ways of advertising breast milk replacement products contribute to reducing breastfeeding rates.^[4]

However, is it justified to identify the actions of part of the pharmaceutical industry with the attitudes and behavior of pharmacists? Does the fact that breastmilk substitutes are sold at pharmacies automatically mean that pharmacists do not support and should not support breastfeeding? Do we not have similar situations and experiences with doctors? For a long time, the influence of the pharmaceutical industry and its representatives on physicians' decisions regarding the choice of medicines and preparations has been sought to be closely monitored and controlled.^[5] It is a logical assumption that the situation is similar to pharmacists, and as a health care provider, their primary interest and purpose is to assist the person seeking help with their actions, and therefore there is no justifiable reason not to allow pharmacists to

participate in breastfeeding education like everyone else. other health professionals.

The fact is that pharmacist awareness is changing. The pharmacist's experience as a passive drug provider prescribed by the physician replaces the pharmacist's experience as an active participant in a complex therapeutic procedure. In 1990, Hepler and Strand pointed out that the coming changes would result in an increase in the level of responsibility of pharmacists and lead to philosophical, organizational and functional changes. As part of this process, they envisaged the inevitability of setting "set new practice standards, establishing cooperative relationships with other health care professions, and determining strategies for marketing pharmaceutical care".^[6] Following such thinking, Croatia is in 2015.

The first positive steps have been taken in the area of pharmacists' involvement in breastfeeding health education programs.

As part of the "Breastfeeding Friendly Community" program, with the cooperation of pediatricians and pharmacists, the project "Breastfeeding Friends" was launched. The term "Friends of Breastfeeding Pharmacies" means pharmacies that adopt a breastfeeding promotion program and apply the provisions of the International Rules on the Advertising and Sale of Breast Milk Supplements. The staff at these pharmacies are educated about the implementation of the breastfeeding program and the breastfeeding site in the pharmacy area is clearly marked. Through participating in the work of the Breastfeeding Counseling Center, pharmacies cooperate with other health care institutions and all segments of the community.^[7]

Pharmacist education on breastfeeding has been ongoing since 2016 in collaboration with the Croatian Pharmaceutical Society, the Croatian Chamber of Pharmacy and the Association for Healthy and Happy Childhood.^[8] Since 2019, the Faculty of Pharmacy and Biochemistry, University of Zagreb has been involved in the implementation of this education, which enabled the education of pharmacists in adolescence. This is important not only at the level of acquiring knowledge but also at forming personal attitudes. Namely, at that age, people, no matter what they were, had not yet been able to practically realize their behavior through breastfeeding. It is much easier to change attitudes until they are confirmed by behavior, and it is logical that a person will be much easier to support professional attitudes and behaviors when they are complementary to his or her personal attitudes and behaviors. Another significant contribution of the University of Zagreb's Faculty of Pharmacy and Biochemistry's participation in the Breastfeeding Friends program is support for the Breastfeeding Friends Program. The aim of this paper was to examine the knowledge, attitudes and intentions of the students of the Faculty of Pharmacy and

Biochemistry and the effectiveness of structured breastfeeding education, which is part of the course "Pharmacy friends of breastfeeding", on changes in students' knowledge, attitudes and intentions. In this research, the subject of interest was the short-term effects of education, immediately after the education, while long-term changes in knowledge, intent and attitudes are the subject of other research.

METHOD

Design

The study is quantitative, analytical, quasi-experimental, comparing the intentions, attitudes and knowledge about breastfeeding students before and after the intervention and relative to the control group. The research was carried out as part of the "Breastfeeding Friends Universities and Polytechnics" and "Breastfeeding Friendship Pharmacies" projects.

Ethical considerations

Each test participant provided informed consent to participate in the test at the beginning of the class and when completing the online questionnaire. The study was approved by the Ethics Committee of the Polytechnic of Bjelovar.

Setting

The study was conducted between October 13 and 21, 2019 for the experimental group (students of the Faculty of Pharmacy and Biochemistry). For the experimental group, lectures were held on October 16 and 18 at the Faculty of Pharmacy and Biochemistry, University of Zagreb. The first online completion of the questionnaire was conducted from 13 to 15 October 2019 and the second from 19 to 21 October. The control group consisted of students from the Polytechnic of Bjelovar, the first online filling in of the questionnaire was conducted from October 15, 2019, and the second from October 21, 2019. Control group students were not exposed to breastfeeding education during the study.

Sample

The criteria for inclusion in the study were adulthood, student status at the Faculty of Pharmacy and Biochemistry, University of Zagreb (for the experimental group) or the Polytechnic of Bjelovar (for the control group), informed consent, access to a computer, computer literacy, subjects were not allowed to be parents. Minors, those with children who were not students of the Faculty of Pharmacy and Biochemistry in Zagreb (for the experimental group) or the Polytechnic of Bjelovar (for the control group) could not participate in the study group) who did not consent to participate in the study. Participation in the study was not made possible for people who have children, as a different questionnaire was used to examine their attitudes and behaviors about breastfeeding. The students received information about the research while attending the course "Pharmacy Care" (experimental group) or "Philosophy and Ethics in Nursing" (control group). No rewards were

offered for participating in the survey, or no denial for not participating in the survey. Within the set time limit in the experimental group, the first completion of the questionnaire was completed by 51 students, the second completion of the questionnaire by 35 students. There were 27 matched results (26 female and 1 female). The age of the respondents ranged from 22 to 25 years, the average age was 22.93 years. In the control group, the first questionnaire was completed by 33 students, the second by 35 students. The matched results were 30. The average age of the respondents was 19.72 years.

Measurement

The measurement was done with a BIAKQ questionnaire that was validated to examine the knowledge, intentions, and attitudes of non-child students and students.^[9] The link to the questionnaire was posted on the website of the Faculty of Pharmacy and Biochemistry in Zagreb from 13 to 21 October 2019. for the experimental group. The deadline for the first completion of the questionnaire was three days before the lecture, and for the second completion of the questionnaire three days after the completion of the lectures and workshops. For the control group, a link to the questionnaire was posted on the website of the Polytechnic of Bjelovar in the same period. The scores on the questionnaires (intentions, attitudes, knowledge) and the total score on the questionnaire were measured.

Intervention

The intervention consisted of two lectures and workshops. Lectures on "The Breastfeeding Friend Community - Results and Challenges So Far" (cf. Marija Catipovic, MD) and "International Rulebook on Advertising and Sales of Breast Milk Supplements" (Prof. Milan Stanojevic, Ph.D. Dr. med.) were held on 16.10.2019. Workshops were held on 18.10.2019. collectively, "The Role of Pharmacists in Promoting Breastfeeding (Katarina Fehir School, Ph.D.). Lectures and workshops are described in the brochure "Friends of Breastfeeding Pharmacies".^[8] The lectures were held at

the Faculty of Pharmacy and Biochemistry in Zagreb. No breastfeeding training was organized for the control group.

Data analysis

Students' answers to the questionnaires were coded into nominal and ordinal variables. The scores on the questionnaire subgroups and the total scores are presented as continuous variables. Arithmetic means and standard deviations of pre- and post-intervention scores by intention categories, attitudes, knowledge, and total score were calculated. Extreme results and normality of distribution (skewness and kurtosis z values, histogram, Q-Q plot, Kolmogorov-Smirnov test) were checked before applying the t-test. A satisfactory sample size for the use of t-test paired samples was confirmed using the Sample Size Calculator for Comparing Paired Differences.^[10] The significance of differences in BIAKQ results before and after education and between the experimental and control groups was examined by paired samples t-test. The correlation between respondents' scores on the intention, attitude, knowledge and total scores on the questionnaire was calculated. The cutoff value for determining statistical significance is 05 or less is chosen.

RESULTS

The marks for a group of students before (pre) and after (post) a teaching intervention are recorded in Table I. The largest differences in the responses of students of the Faculty of Pharmacy and Biochemistry before and after education were realized in the overall scores and attitude subscale. The arithmetic mean of the intentions of the students of the Faculty of Pharmacy and Biochemistry is less than the result of the students of the Polytechnic of Bjelovar before and after the education, while the arithmetic mean of the pre-education attitudes is lower and slightly higher than the results of the students of the Polytechnic of Bjelovar. In terms of knowledge, the differences are small before and after education.

Table 1: The differences in arithmetic means of students' responses to the BIAKQ questionnaire before and after education.

Students FPB*	Intention			Attitudes			Knowledge			Total		
	Before educ.	After educ.	Diff	Before educ.	After educ.	Diff	Before educ.	After educ.	Diff	Before educ.	After educ.	Diff
1	24	36	12	61	144	83	13	13	0	98	193	95
2	36	39	3	72	148	76	10	12	2	118	199	81
3	40	44	4	71	153	82	13	12	-1	124	209	85
4	28	37	9	44	143	99	13	13	0	85	193	108
5	22	27	5	71	126	55	12	13	1	105	166	61
6	35	42	7	64	145	81	12	13	1	111	200	89
7	35	34	-1	68	141	73	13	13	0	116	188	72
8	31	41	10	67	130	63	10	13	3	108	184	76
9	36	42	6	68	142	74	10	13	3	114	197	83
10	29	32	3	57	117	60	11	13	2	97	162	65
11	34	34	0	79	138	59	13	13	0	126	185	59
12	31	31	0	70	131	61	11	13	2	112	175	63
13	17	16	-1	57	132	75	13	13	0	87	161	74

14	31	41	10	59	128	69	12	13	1	102	182	80
15	23	26	3	58	115	57	13	12	-1	94	153	59
16	41	47	6	91	155	64	13	13	0	145	215	70
17	29	33	4	71	141	70	13	13	0	113	187	74
18	20	28	8	56	110	54	10	13	3	86	151	65
19	27	29	2	62	140	78	12	11	-1	101	180	79
20	31	38	7	67	148	81	11	13	2	109	199	90
21	42	50	8	74	158	84	12	13	1	128	221	93
22	36	41	5	40	149	109	13	13	0	89	203	114
23	32	43	11	66	147	81	11	11	0	109	201	92
24	40	39	-1	76	134	58	12	11	-1	128	184	56
25	31	34	3	68	132	64	13	13	0	112	179	67
26	31	40	9	63	132	69	11	13	2	105	185	80
27	35	48	13	56	156	100	10	13	3	101	217	116
Mean	31,37	36,74	5,37	65,04	138,33	73,3	11,85	12,67	0,81	108,26	187,74	79,48
Students BUAS**	Before educ.	After educ.	Diff	Before educ.	After educ.	Diff	Before educ.	After educ.	Diff	Before educ.	After educ.	Diff
1	26	26	0	107	104	-3	12	10	-2	145	140	-5
2	33	32	-1	102	106	4	10	11	1	145	149	4
3	47	48	1	134	138	4	12	12	0	193	198	5
4	40	39	-1	128	130	2	11	10	-1	179	179	0
5	42	42	0	133	134	1	12	12	0	187	188	1
6	23	24	1	118	115	-3	12	11	-1	153	150	-3
7	40	39	-1	124	124	0	12	12	0	176	175	-1
8	46	45	-1	132	136	4	10	12	2	188	193	5
9	31	31	0	112	117	5	12	12	0	155	160	5
10	23	21	-2	121	122	1	11	13	2	155	156	1
11	45	47	2	141	146	5	13	13	0	199	206	7
12	35	37	2	104	106	2	13	12	-1	152	155	3
13	33	34	1	127	125	-2	11	10	-1	171	169	-2
14	32	31	-1	118	115	-3	10	11	1	160	157	-3
15	49	50	1	155	160	5	12	12	0	216	222	6
16	48	48	0	144	147	3	13	12	-1	205	207	2
17	40	41	1	125	127	2	12	12	0	177	180	3
18	38	40	2	122	125	3	13	13	0	173	178	5
19	41	41	0	153	150	-3	12	12	0	206	203	-3
20	44	46	2	148	146	-2	9	10	1	201	202	1
21	46	46	0	144	141	-3	12	12	0	202	199	-3
22	42	42	0	140	141	1	12	13	1	194	196	2
23	36	36	0	153	158	5	13	13	0	202	207	5
24	42	43	1	139	134	-5	11	11	0	192	188	-4
25	39	39	0	144	142	-2	13	13	0	196	194	-2
26	40	40	0	131	128	-3	12	12	0	183	180	-3
27	36	36	0	119	120	1	12	11	-1	167	167	0
28	24	26	2	102	105	3	10	10	0	136	141	5
29	30	30	0	124	120	-4	11	9	-2	165	159	-6
30	37	37	0	129	133	4	12	11	-1	178	181	3
Mean	37,60	37,90	0,30	129,10	129,83	0,73	11,67	11,57	-0,10	178,37	179,30	0,93

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For the paired samples t-test to be valid the differences between the paired values should be approximately normally distributed. The normality of the distribution we checked by calculating the z value for skewness and kurtosis. We also checked the normality of the distribution with the Kolmogorov-Smirnov test. There were no significant outliers in the differences between

the two related groups. Only the results of the Kolmogorov-Smirnov test for the variable knowledge showed possible significance, but the calculation of skewness and kurtosis and their ratio to statistical error allowed the use of parametric tests.

Table 2: Validity of paired (related) t-tests.

Faculty of Pharmacy and Biochemistry		Statistic	Std. Error	Statistic/Std. Error*	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)
Intention	Skewness	0,04	0,45	0,10	0,46	0,98
	Kurtosis	-0,92	0,87	-1,05		
Attitudes	Skewness	0,80	0,45	1,79	0,60	0,87
	Kurtosis	0,37	0,87	0,43		
Knowledge	Skewness	0,37	0,45	0,82	1,29	0,07
	Kurtosis	-1,08	0,87	-1,24		
Total	Skewness	0,69	0,45	1,54	0,48	0,98
	Kurtosis	-0,02	0,87	-0,03		
Bjelovar University of Applied Sciences						
Intention	Skewness	-0,14	0,43	-0,32	1,08	0,19
	Kurtosis	-1,01	0,83	-1,21		
Attitudes	Skewness	-0,20	0,43	-0,47	0,93	0,35
	Kurtosis	-1,41	0,83	-1,70		
Knowledge	Skewness	0,21	0,43	0,49	1,42	0,04
	Kurtosis	-0,44	0,83	-0,52		
Total	Skewness	-0,20	0,43	-0,46	0,68	0,74
	Kurtosis	-0,96	0,83	-1,16		

*z-value must be between -1.96 and 1.96

The data are summarised by giving their average and standard deviation (SD), and the paired t-test is used to compare the means of the two samples of the paired data. The education significantly improved the scores on the knowledge, attitudes and intentions, and the overall results on the BIAKQ questionnaire of the students of the Faculty of Pharmacy and Biochemistry Bjelovar.

Polytechnic students who were not exposed to education did not differ significantly in Tests 1 and 2. After education, students of the Faculty of Pharmacy and Biochemistry score better on the attitude and knowledge subscales compared to the students of the Polytechnic of Bjelovar, but not on the intent subscale and the overall results of the BIAKQ questionnaire.

Table 3: Paired Samples Test, The difference in BIAKQ score before and after education

Faculty of Pharmacy and Biochemistry		Mean Diff.	Std. Error Mean	95% Confidence Interval of the Difference		t	p
				Lower	Upper		
Before/After educ.	Intention score	5,37	0,79	3,74	7	6,78	0,00
Before/After educ.	Attitudes score	73,3	2,72	67,7	78,9	26,91	0,00
Before/After educ.	Knowledge score	0,81	0,26	0,29	1,34	3,18	0,00
Before/After educ.	Total score	79,48	3,15	73,01	85,96	25,24	0,00
Bjelovar University of Applied Sciences							
Test 1. / Test 2.	Intention score	-0,30	0,19	-0,69	0,09	-1,56	0,13
Test 1. / Test 2.	Attitudes score	-0,73	0,59	-1,93	0,46	-1,25	0,22
Test 1. / Test 2.	Knowledge score	0,10	0,18	-0,26	0,46	0,57	0,57
Test 1. / Test 2.	Total score	-0,93	0,67	-2,31	0,44	-1,39	0,18
FPB before educ. vs. BUAS test 1							
Before educ. / Test 1.	Intention score	6,23	1,84	2,54	9,92	3,38	0,00
Before educ. / Test 1.	Attitudes score	64,06	3,41	57,23	70,90	18,81	0,00
Before educ. / Test 1.	Knowledge score	-0,19	0,30	-0,78	0,41	-0,63	0,53
Before educ. / Test 1.	Total score	70,11	4,79	60,49	79,72	14,63	0,00
FPB after educ. vs. BUAS test 2							
After educ. / Test 2.	Intention score	1,16	2,02	-2,89	5,21	0,57	0,57
After educ. / Test 2.	Attitudes score	-8,50	3,73	-15,97	-1,03	-2,28	0,03
After educ. / Test 2.	Knowledge score	-1,10	0,24	-1,58	-0,62	-4,58	0,00
After educ. / Test 2.	Total score	-8,44	5,44	-19,34	2,45	-1,55	0,13

* FPB = Faculty of Pharmacy and Biochemistry

** BUAS = Bjelovar University of Applied Sciences

The education significantly improved the scores on the knowledge, attitudes and intentions, and the overall results on the BIAKQ questionnaire of the students of the Faculty of Pharmacy and Biochemistry. Bjelovar Polytechnic students who were not exposed to education did not differ significantly in Tests 1 and 2. After

education, students of the Faculty of Pharmacy and Biochemistry score better on the attitude and knowledge subscales compared to the students of the Polytechnic of Bjelovar, but not on the intent subscale and the overall results of the BIAKQ questionnaire.

Table 4: Cross-correlation of results on the BIAKQ questionnaire before and after the training.

Before education (BFF)	Intention	Attitudes	Knowledge	Total
Intention	1	0.45*	-0.03	0.76**
Attitudes	0.45*	1	0.02	0.92**
Knowledge	-0.03	0.02	1	0.08
Total	0.76**	0.92**	0.08	1
After education (BFF)				
Intention	1	0.69**	0	0.87**
Attitudes	0.69**	1	-0.06	0.95**
Knowledge	0.00	-0.06	1	0.00
Total	0.87**	0.95**	0.00	1
1. Test (VUB)				
Intention	1.00	0.715**	0.19	0.866**
Attitudes	0.715**	1.00	0.23	0.967**
Knowledge	0.19	0.23	1.00	0.28
Total	0.866**	0.967**	0.28	1.00
2. Test (BFF)				
Intention	1	.740**	.341	.875**
Attitudes	.740**	1	.445*	.971**
Knowledge	.341	.445*	1	.476**
Total	.875**	.971**	.476**	1

*, Correlation is significant at the 0.05 level (2-tailed)

**, Correlation is significant at the 0.01 level (2-tailed)

DISCUSSION

At the beginning of the discussion, the topic of the relevance of breastfeeding education is raised, which is related to the evaluation of its effectiveness. Lumbiganon states that "we are still unsure if antenatal BF education is able to help women; at present, there is no good evidence from randomized controlled trials to suggest these efforts to educate pregnant women translate into more and longer BF's.^[11] However, when we look more closely at the studies analyzed, we notice that it is "20 studies involving 9789 women contributed to the analyzes ... during pregnancy, before the baby arrives".^[11] Thus, the results of pregnancy courses are analyzed, and prenatal education does not just come down to pregnancy courses. The authors support the view that breastfeeding education should begin before breastfeeding views are finally formed, and this is certainly before pregnancy. Such an attitude stems from the scientifically validated fact that the information itself (change of knowledge) is not sufficient to change the already formed negative attitudes and behavior. Not comparing breastfeeding education in terms of substance and organization with addiction treatment programs, but with the aim of experientially validating the view that knowledge change is not sufficient to change behavior, we refer to papers describing the difficulties that fellow psychiatrists face in trying to induce and sustain behavioral changes in treatment various types of

addictions developed.^[12,13] We agree with Fujimori's conclusion that „interventions carried out during the prenatal and postnatal periods, have a limited influence on individuals' decisions about breastfeeding. The infant feeding can be formed prior to pregnancy and even before adolescence.^[14] Breastfeeding education should begin at an early school age.^[15,16] However, in relation to the Lumbiganon research, we raise the question of how many countries at the state level (eg at the level of the Ministry of Health) have adopted a structured program for educating pregnant women on breastfeeding, with ongoing supervision of educational activities. Only by analyzing standardized and supervised programs for the education of pregnant women on breastfeeding is it possible to obtain objective data on the effectiveness of education of pregnant women on the frequency and duration of breastfeeding.

The curriculum for the cross-curricular theme Health for Secondary Schools in the Republic of Croatia includes the topic of breastfeeding within the domain of Physical Health, 5th cycle (3rd and 4th grades of four-year; 2nd and 3rd grades of three-year high school programs).^[17] The process of adopting a structured breastfeeding education program for high school students, developed by the working group of the Ministry of Health's Commission for the Protection and Promotion of Breastfeeding, is underway. What has already been said

for pregnancy courses, as well as for the education of adolescents, only a structured education program, which is continuously supervised, can give positive effects in the future as the rate and duration of breastfeeding increase.

The Commission for the Protection and Promotion of Breastfeeding of the Ministry of Health, following the efforts to ensure continuity of work with young people on forming positive attitudes and intentions about breastfeeding, initiated the introduction of breastfeeding education in higher education institutions (Universities and colleges of breastfeeding friends), as a continuation of education on breastfeeding. breastfeeding in high schools. The Polytechnic of Bjelovar officially offered breastfeeding education to its students as an independent elective course entitled "Contemporary Breastfeeding Lessons" in 2018.^[18] The introduction of breastfeeding content into the curriculum of secondary and university education has been included in the National Program for the Protection and Promotion of Breastfeeding for the period 2018 to 2020 as one of its priority tasks.^[19] As part of the above, the aim of the activities carried out at the Faculty of Pharmacy and Biochemistry is to enable pharmacy students, as future health care professionals, to provide clients with accurate information on possible breastfeeding problems (impact of medicines, dispensing equipment, treatment of ragada etc.) and be motivated to provide the necessary support for breastfeeding. It is also important that the students themselves, as prospective parents, are able to make the best nutrition decisions for their child after completing the education, in accordance with the recommendations of WHO and UNICEF. It is very important to create specific educational programs for students of individual studies. Unlike high school students' education programs, breastfeeding education programs for students need to be tailored to their studies. Taking into account the outcomes, ie practical tasks for which the studies prepare their students, education programs for pharmacists, for example, will differ from the education programs for students of the Faculty of Kinesiology (physical activity of mother after childbirth, exercise program for breastfeeding mother, etc.).

Analyzing the results of the study, a superficial overview of the results shows that the male students' poor response to education and research is noticeable. One student who took the 50-student exam is a much lower ratio than expected, according to the gender representation of male college students. Men are known to avoid breastfeeding education, although they have less knowledge of breastfeeding than women, eg Jolly finds that only 47% of male respondents "knew that breastfeeding helps prevent infant infections, and 15% knew it could prevent breast cancer in the mother."^[20] Greene notes that "females were more positive than males both in relation to breastfeeding in public and breastfeeding promotion."^[21] Patriarchal views on gender roles are still rooted in men (but also women) in our socio-cultural realm. Ward describes very well the negative

consequences of such a social atmosphere, "the masculinity ideology endorses traditional beliefs about gender and is associated with expressing more negative views towards a childbirth, less support for public breastfeeding, and more concern that breastfeeding interferes with marital / sexual relations".^[22] We need to involve future fathers in our activities, because breastfeeding education will not produce results until we are able to refine these immature attitudes and replace them with a contemporary experience of the role of the father in the family.^[23] We know from experience that such work is very painstaking because it is not enough to resist the change of traditional parenting roles already adopted, but rather to help partners overcome their fears of new challenges and provide their fathers with long-term support to adopt and sustain new behaviors.^[24]

Another frustrating observation of this study is the significant dropout of experimental group respondents during the study. In order to minimize the potential impact on respondents in the study plan, it did not intended contact of the author with the respondents except at the time of education, so that it was not possible to access them subsequently and work out the reasons for quitting. So we can only assume the reasons for quitting. One reason is probably the belief that "everyone knows everything" about breastfeeding, which results in the fact that the rare are indeed educated.^[25] A possible reason for the decline in the respondents' interest in the continuation of the research is the avoidance of responsibility until the moment of inevitability, which according to Nicodemus and Aračić is part of the process of "infantilizing a society that prolongs childhood, and the socialization process becomes instantaneous fulfillment of desires without real learning".^[26] The authors believe that such unhealthy social trends should be confronted, and in the continuation of education, they plan to make clear to students the responsibility of parents for children's health, as well as the fact that inaction, passivity and avoidance lead to inevitable consequences. The main factor in the success of breastfeeding is the maturity of the parents, which is not only the result of their life experience, educational status, knowledge of breastfeeding, family support, connection and recognition of the child's feelings and needs, but all of these together, with the ability and willingness to reasonably subordinate their time, interests and energy needs of the child over a certain period of life. Young people should be honestly told that breastfeeding is rarely simple and easy, most often requiring hard work, effort, giving, in which the mother needs the support of her husband, relatives, health professionals and the entire community.^[27] We believe that only a sincere performance will motivate students to participate in breastfeeding education.

Comparison of the results of the respondents before and after the training confirms the effectiveness of the applied educational program. Such a result is expected

because it is consistent with the results of research already carried out on high school students.^[3] That is why it seems to us that the focus of the debate should be on each other's observations. The first observation is that students of the Faculty of Pharmacy and Chemistry before breastfeeding education have significantly worse results than the students of the Polytechnic of Bjelovar in terms of intentions, attitudes and overall results on the BIAKG questionnaire, but not in terms of knowledge about breastfeeding! Having completed their education, they have better knowledge than students of the Polytechnic of Bjelovar, a positive shift on the attitude questionnaire, but still have no positive intentions of breastfeeding or better results on the overall questionnaire. Another observation is that intentions and attitudes in the experimental group correlate significantly positively with each other and with the total scores on the questionnaire, both before and after education, until knowledge shows no significant correlations. This is interesting because it begs the question of what changed the intentions and attitudes of the experimental group, if not knowledge. The lack of correlation between changes in breastfeeding knowledge and attitudes is also mentioned by long authors,^[28,29] and the above observation is not limited to the field of breastfeeding education.^[30] In our case, the results suggest that changes in knowledge cannot explain or at least cannot fully explain the level of changes in breastfeeding intentions and attitudes. Nowadays, especially young people, often without our own will and choice, we are overwhelmed by information that is questionable for reliability (social networks, advertising messages on television or the web). However, we also find contradictory statements in the professional literature. Take for example Pabst's assertion that "particularly in the case of premature or sick babies, the babies are unable to suckle and must be fed from the bottle",^[31] which is completely contrary to Dodds' view: "Breastmilk is invaluable for premature and sick babies".^[32] Consider the cover story in *The Telegraph*: "Breastmilk no better for baby than formula, scientist claims!"^[33] It is not surprising that students are suspicious of information coming from an unverified source. During the class, students search the Internet databases and ask questions about contradictory conclusions of different papers, and check the credibility of the lecturer. In other words, merely presenting scientific facts will not cause a change in intentions and attitudes, the lecturer must make the listeners trust him. How long does it take to gain the confidence of the audience and how to achieve it? Willis and Todorov argue that we make the second person's estimate per second^[34] and the second is not sufficient to rationally process all the person's data, suggesting the importance of intuitive observation in the decision-making process. It is easier to accept information from the person we experience emotionally and behaviorally identified with what he is saying, as Arneson concludes, "It's not what you say; it's how you say it".^[35] Changes in attitudes and intentions depend not only on what the person is saying, but also on the listener's belief that the person truly

believes and implements the attitudes and behaviors he or she represents.^[36] An important component of embracing change is believing that we ourselves are capable of implementing what we have learned. If the task seems too difficult or even unattainable, the person will give up before trying. The goals and expectations should be graduated and gradually set. Also important are the situational factors that motivate change, the personal significance of the attitudes we are talking about, the teaching technique, etc.^[37] Although impossible Combining all these factors into one common denominator, we can say that a better result will be achieved by a lecturer who succeeds in introducing listeners to the content on a personal level.

Some limitations of work have already been mentioned, relatively low turnout of students, especially men, and students from other faculties of pharmacy should be included in the sample. Due to the limited space for publication of work, the long-term effects of education will be published in a separate paper.

CONCLUSION

The results of the study confirmed the effectiveness of breastfeeding education at the Faculty of Pharmacy and Biochemistry. The decline in the interest of the respondents in the continuation of the research indicates that students are not sufficiently aware of the lifelong benefits of breastfeeding for mother and child health. The authors explain the poor participation of male students by the traditional experience of the role of the father, in which breastfeeding is the sole task of the mother. Social trends of the infantilisation of society and the rapid fulfillment of desires, while avoiding responsibility, can also have an impact on students' motivation. Statistically significant changes in intentions, attitudes, knowledge, and overall scores on the BIAKG questionnaire after education of the experimental group students do not follow up with significant changes in intentions and overall outcomes relative to the control group, which was not exposed to education. In order for future dosist pharmacists to be able to identify with the acquired knowledge about breastfeeding and to equate with the intentions and attitudes of other health professionals (control group - nursing study), one, even a multi-day, well-structured educational intervention is not sufficient. More diverse educational interventions should be planned over the longer term. The weak correlation of changes in knowledge with changes in the intentions, attitudes, and overall results of the experimental group suggests that these changes are the result of actions and other factors, not just changes in knowledge.

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