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Breastfeeding and their knowledge by nursing students

ABSTRACT | Objective: To investigate the knowledge of nursing students about breastfeeding. Methods: Cross-sectional, qualitative and quantitative approach developed at a private university in an inner city in São Paulo State. Data collection was performed using a questionnaire comprising 15 questions about breastfeeding, distributed in three parts. Questions about breastfeeding management, legal aspects of breastfeeding protection and breastfeeding benefits were included. Data were analyzed using the simple descriptive and variance analysis was performed for comparisons. Results: Nursing students in the eighth semester achieved an overall performance of 81.2% in the correct answers, a value statistically superior to one of the classes in the seventh period, but similar to the other. Conclusion: Despite the good knowledge about the advantages of breastfeeding, knowledge was shown to be lower than expected with regard to the physiological process of breastfeeding.

Keywords: Breastfeeding; Knowledge; Nursing students

RESUMEN | Objetivo: Investigar el conocimiento de los estudiantes de enfermería sobre la lactancia materna. Métodos: enfoque transversal, cualitativo y cuantitativo desarrollado en una universidad privada en una ciudad del interior del estado de São Paulo. La recolección de datos se realizó mediante un cuestionario que comprende 15 preguntas sobre lactancia materna, distribuidas en tres partes. Se incluyeron preguntas sobre el manejo de la lactancia materna, los aspectos legales de la protección y los beneficios de la lactancia materna. Los datos se analizaron mediante el análisis descriptivo simple y se realizó un análisis de varianza para las comparaciones. Resultados: Los estudiantes de enfermería en el octavo semestre lograron un rendimiento general del 81.2% en las respuestas correctas, un valor estadísticamente superior a una de las clases en el séptimo período, pero similar al otro. Conclusión: a pesar del buen conocimiento sobre las ventajas de la lactancia materna, se demostró que el conocimiento es menor de lo esperado con respecto al proceso fisiológico de la lactancia materna.

Palavras claves: Lactancia Materna; Conocimiento; Estudiantes de enfermería.

RESUMO | Objetivo: Investigar o conhecimento dos alunos de enfermagem sobre o aleitamento materno. Métodos: Abordagem transversal, qualitativa e quantitativa de campo desenvolvido em Universidade particular do interior de São Paulo. A coleta de dados foi realizada utilizando-se questionário, com 15 perguntas sobre amamentação, distribuídas em três partes. Foram incluídas perguntas sobre manejo na amamentação, aspectos legais na proteção ao aleitamento materno e benefícios da amamentação para o binômio. Analisou-se os dados por meio da descritiva simples e para as comparações foi utilizado a análise de variância. Resultados: Os alunos de enfermagem do oitavo semestre obtiveram desempenho geral de 81,2% nas respostas corretas, valor estatisticamente superior a uma das turmas do sétimo período, mas semelhante à outra turma. Assim a turma sétimo A e oitavo tiveram resultados significativos na pesquisa. Conclusão: Apesar do bom conhecimento sobre as vantagens do aleitamento, evidenciou-se conhecimento inferior ao esperado no que se refere ao processo fisiológico do aleitamento materno.

Palavras-chaves: Aleitamento materno; Conhecimento; Estudantes de enfermagem.

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INTRODUCTION

Breastfeeding is the main source of nutrients for the newborn, thus considered a fundamental practice for the healthy development of the child. Breast milk is a natural food rich in fats, proteins, immunological and other nutrients, thus providing vital energy for the development of the newborn. ^(1,2)

The nurse is fundamental in the promotion and management of breastfeeding, since it is a practice in which many barriers can be evidenced during this period, yet, the nurse is in all services working from prenatal to the puerperium. ⁽³⁾ It is essential that nurses act actively in

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the breastfeeding process, assisting the puerperal woman and assisting her from the first breastfeeding, clarifying doubts and guiding the benefits of breastfeeding, which is considered ancient because of its wide benefits for the mother / newborn binomial. ^(4,5)

The main strategy of the World Health Organization (WHO) to reduce unfavorable perinatal outcomes and infant mortality is the promotion of breastfeeding worldwide ⁽⁶⁾, therefore, the promotion of breastfeeding should be one of the priority actions in health services. Breastfeeding contributes to the child's development by protecting against allergies; chronic non-communicable diseases; promotes adequate neurological development and stimulates the link between the binomial. ^(7,8)

Breastfeeding prevents the rate of infant deaths and also promotes the child's physical, mental and psychological health. It is estimated that breastfeeding reduces 13% of deaths in children under 5 years of age and 19 to 22% of neonatal deaths, if practiced in the first hour of life. Studies show that the average duration of exclusive breastfeeding is 1,8 months and the average breastfeeding with complementation is 11,2 months. ^(9,10)

With scientific advances and greater dissemination of breastfeeding, the practice has increased in Brazil, mainly in the prevalence of exclusive breastfeeding in children under 06 months, with rates of 41% in Brazilian capitals and the Federal District. ^(11,12)

For this reason, during graduation the nursing student needs solid information, with theoretical knowledge along with the practice, in order to guarantee quality care, both for the mother and the newborn, with actions of promo-



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tion, protection and support for breastfeeding. ^(11,13)

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Studies carried out with nursing students have shown that the student's preparation is still flawed in relation to breastfeeding. Only 25% of nurses indicated academic education as the greatest source of knowledge acquired in breastfeeding. Another study carried out by a Federal University, found that university students, in general, feel insecure to advise pregnant women and / or infants about breastfeeding, taking suggestions about the possible reformulation in the curricula of courses, thus reinforcing the best teaching of this practice in Universities. ⁽¹³⁾

There are only a few studies in the literature that relate the knowledge about breastfeeding among undergraduate nursing students and students, showing the fragility of this association's discussion. ^(9,13)

In view of the above, the present study aimed to assess: What is the knowledge of students, from the last two periods of the undergraduate nursing course, at Universidade do Oeste Paulista, about breastfeeding?

The study characterized the aspects of students' knowledge about breastfeeding and identified the areas in which the students had greater theoretical mastery on the topic.

METHOD

A quantitative, qualitative and cross-sectional study was carried

Table 1. Sociodemographic characterization of the population (n= 84).

Variável	n	%
Sexo		
Feminino	72	85,7
Masculino	12	14,3
Estado civil		
Casado	24	28,6
Solteiro	60	71,4
Número de filhos		
0	64	76,2
1	9	10,7
2	9	10,7
3	2	2,4
Já amamentou?		
Não	67	79,8
Sim	17	20,2
Preparo sobre aleitamento materno		
Bem	30	35,7
Mal	2	2,4
Muito bem	24	28,6
Regularmente	28	33,3

Source: The authors/2017

Table 2. Percentage of response patterns in relation to Management in BF.

Questões	Sim (%)	Não (%)	Não sei (%)
O leite materno é produzido nos alvéolos?	9,5	17,4	13,1
Na hora que a mãe estiver amamentando ela pode sentir dor nos seios?	83,3	16,7	0,0
O queixo do recém-nascido deve estar tocando o seio da mãe?	73,8	23,8	2,4
Na hora do AM é possível ver as sucções lenta e profunda que o RN faz?	97,6	1,2	1,2
A boca do RN deve estar bem aberta porem o lábio inferior deve esta voltada para fora?	84,5	9,5	6,0

*NB:New born *BF: Breastfeeding

Source: The authors/2017

Table 3. Percentage of response patterns in relation to legal aspects in protecting BF.

Questões	Sim (%)	Não (%)	Não sei (%)
O AM tem vantagens nutricionais: adequado no crescimento e desenvolvimento?	97,6	1,2	1,2
O AM tem vantagens imunológicas: proteção contra doenças a curta e longo prazo?	100	0,0	0,0

out, through the application of a questionnaire containing the socio-demographic variables and knowledge about breastfeeding.

Students from the last two periods (semesters) of the undergraduate nursing course at Universidade Do Oeste Paulista (UNOESTE) in Presidente Prudente, located in the inner state of São Paulo, were included. It was used as inclusion criteria that the participants signed the Free and Informed Consent Form and be graduating from the last two periods of the Nursing course at the Universidade do Oeste Paulista / UNOESTE and as discontinuity criteria data loss related to data collection.

The study variables and the sociodemographic characteristics of the students, as well as the personal and behavioral data of interest were collected following the questionnaire established for the present study.

The study was carried out from November 2016 to February 2017, and was previously approved by the Research Ethics Committee of the CAAE Institution no. 48839815.3.0000.5515. Information on breastfeeding was obtained, each with three possible responses: yes, no and I don't know. Questions were included on breastfeeding management, legal aspects of breastfeeding protection, benefits of breastfeeding for the mother and newborn.

The data were stored in Excel 2013 spreadsheets, checked and evaluated for consistency and, subsequently, submitted to simple descriptive statistical analysis, and, for comparisons of the data of the evaluated nursing course classes, within and between groups, the analysis of variance test (ANOVA) was used; for all tests performed, the limit of statistical significance was p less than or equal to 0,05.

Pode dar qualquer outro tipo de líquido ou alimento ao RN além do leite materno?	4,8	95,2	0,0
Existe duração máxima na amamentação?	22,6	77,4	0,0
O AM tem vantagens psicológicas: aspectos emocionais para o RN e para a mãe?	98,8	0,0	1,2

BF Breastfeeding; NB: Newborn

Source: The authors/2017

Table 4. Percentage of response patterns in relation to the benefits of breastfeeding for women and newborns.

Questões	Sim (%)	Não (%)	Não sei (%)
O leite materno é difícil de ser digerido e provoca mais cólica no RN?	1,2	95,2	1,2
O leite materno colabora na formação do sistema imunológico da criança?	97,6	0,0	2,4
Na hora da amamentação aumenta o vínculo entre mãe e filho?	100	0,0	0,0
O leite materno previne anemia?	71,4	13,1	15,5
A amamentação pode proteger a mãe contra o câncer de mama e de colo de ovário?	64,3	20,2	15,5

NB: Newborn

Source: The authors/2017

Table 5. Question content and percentage of correct answers / question and average and standard deviation (sd).

Conteúdo das Questões	Acertos N (%)	Média± DP
O leite materno é produzido nos alvéolos?	8 (9,5)	0,56(± 0,17)
Na hora que a mãe estiver amamentando ela pode sentir dor nos seios?	14 (16,7)	0,56(± 0,17)
O queixo do recém-nascido deve estar tocando o seio da mãe?	62 (73,8)	0,56(± 0,17)
Na hora da amamentação é possível ver as sucções lenta e profunda que o RN faz?	82 (97,6)	0,56(± 0,17)
A boca do RN deve estar bem aberta porem o lábio inferior deve estar voltado para fora?	71 (84,5)	0,56(± 0,17)
O AM tem vantagens nutricionais: adequado no crescimento e desenvolvimento?	82 (97,6)	0,94(± 0,11)
O AM tem vantagens imunológicas: proteção contra doenças a curta e longo prazo?	84 (100)	0,94(± 0,11)
Pode dar qualquer outro tipo de líquido ou alimento ao recém-nascido além do leite materno?	80 (95,2)	0,94(± 0,11)
Existe duração máxima na amamentação?	65 (77,4)	0,94(± 0,11)
O AM tem vantagens psicológicas: aspectos emocionais para o RN e para a mãe?	83 (98,8)	0,94(± 0,11)
O leite materno é difícil de ser digerido e provoca mais cólica no RN?	82 (97,6)	0,86(± 0,16)
O leite materno colabora na formação do sistema imunológico da criança?	82 (97,6)	0,86(± 0,16)

RESULTS

84 students of the undergraduate Nursing course at Universidade do Oeste Paulista participated in this study, where $n = 30$ (35,7%) from the seventh period A, $n = 27$ (32.15%) from the seventh period C, and $n = 27$ (32,15%) of the eighth period of the course. Table 1 shows the sociodemographic characterization of the research participants. Most participants were female and said they did not breastfeed; most participants also declared to be single and have no children.

The percentage of response patterns in relation to Management in breastfeeding (BF) are shown in Table 2, and it is observed that a high percentage (13.1%) of students did not know how to answer the question "Breast milk is produced in the alveoli?". Table 3 shows the legal aspects of protecting breastfeeding. All students correctly answered the question "BF has immunological advantages: protection against short- and long-term illnesses".

Table 4 shows the percentages of response patterns in relation to the benefits of breastfeeding for women and newborns. In the same way as described above, 100% of the participants answered yes to the question "Does breastfeeding increase the bond between mother and child?". On the other hand, 15,5% of the students were unable to answer the questions: "Can breastfeeding protect the mother against breast and ovarian cancer?" "And" "Can breast milk prevent anemia?".

The content of the questions and the percentage of correct answers per question and mean and deviation are described in Table 5. The performance of each class studied, in each section of the questionnaire, was compared and the results are shown in Table 6. It is observed that

Na hora da amamentação aumenta o vínculo entre mãe e filho?	84 (100)	0,86(± 0,16)
O leite materno previne anemia?	60 (71,4)	0,86(± 0,16)
A amamentação pode proteger a mãe contra o câncer de mama e de colo de ovário?	54 (64,3)	0,86(± 0,16)

BF: Breastfeeding; NB: Newborn

Source: The authors/2017

Table 6. Presentation of the performance of each class in each section of the questionnaire

Taxa de Acerto	Sétimo A %	Sétimo C %	Oitavo %	p
Geral	78,7	76,5	81,2	0,149
Manejo na Amamentação.	54,0	57,0	58,5	0,608
Aspectos legais na proteção ao AM.	97,3	91,1	92,6	0,086
Benefícios da amamentação para a mulher e ao RN.	84,7	81,5	92,6	0,035

Source: The authors/2017

Table 7. Difference in average hit rate between terms

Turmas	Acerto	IC Ins	IC Sup	Resultado
7ªA-7ªC	-0,0319	-0,1329	0,0692	Não significativo
7ªA-8ªT	0,0793	0,0218	0,1803	Não significativo
7ªC-8ªT	0,1111	0,0075	0,2148	Significativo

Source: The authors/2017

the last period of the course presents significantly superior knowledge about the issues related to the benefits of breastfeeding for women and newborns. In this context, this class, in general, had lower error rates compared to the class of the seventh period C, however class A presented an index similar to the last period of the course (Table 7).

DISCUSSION

This study made it possible to identify the sociodemographic profile and the knowledge about breastfeeding by undergraduate nursing students at a private university from the inner state of São Paulo, based on the sample of 84 students, the data found in this study are possibly similar to that of other undergradua-

te students at private universities of the same size.

The study by Casagrande ⁽¹³⁾ in the nursing course it was shown that only one person declared having a child and one person replied that they had breastfed, our findings, however, differ from the previous study, since 20 people replied having children and 17 people replied that they had already breastfed. In this same context, in the study on breastfeeding by Badagnan ⁽⁹⁾, only two people claimed to have children and the average age of the students was 21 years old. In the present study, 20 students answered that they had children and the average age was 26.8 years, so we can observe older people, which justifies, in part, a greater number of people with children. Such diver-

gences demonstrate a socio-demographic difference between regions of the country between university students with and without children.

Nakamura et al (14) conducted a study with 346 girls from a high social level school (school A - 149 students), and a low social school (school B - 197 students), aged 9 to 15, who answered a breastfeeding questionnaire maternal. Regarding "What do you think about breast milk for the baby?", 45 girls (30%) from school A and 105 girls (54%) from school B answered that "Protect the baby", which is considered a low percentage on this concept, compared to our study in which 84 students (100%) responded that breast milk protects the baby. In the study mentioned, a second question asked to the girls was "What do you think of the mother breastfeeding the baby?", And 116 (78%) students from school A and 144 (73%) students from school B answered "Bring the mother closer to the baby", in the present study, 100% of the students answered that they increase the bond between mother and baby. Thus, it is concluded that there is still a little lack of awareness among school girls about the concept that breastfeeding brings the mother closer to the baby.

Regarding the performance of the participants on the knowledge on breastfeeding, it was expected that nursing students in the last period would obtain better performance, considering the difference of the three years already completed in graduation. This was observed in relation to one of the classes (seventh C), but not in relation to the seventh period A, which was similar to the eighth period. In Brazilian studies carried out by Arantes ⁽⁸⁾ and Caldeira ⁽¹⁵⁾ with professionals from family health teams the data corro-

borate the performance among professionals who became nurses.

Study by author Lelis ⁽¹⁶⁾ points out that several factors show the low frequency in the practice of breastfeeding, either due to the difficulty of the mother's access to specialized services, or because she does not know the correct way of breastfeeding after hospital discharge. Our study, however, demonstrated that, among people with children (n = 20) (all answers were women), 17 of them reported having breastfed, which shows a high percentage (85%), demonstrating good knowledge and access to local population to information and assistance on breastfeeding.

Overall, this study found an important difference between knowledge about breastfeeding, when compared to the seventh and eighth terms, making it possible to identify the need to improve the preparation of these students during graduation



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for maternal counseling. In addition to knowledge assessment, it would be interesting to investigate through qualitative research, with focus groups, the students' perception of the aspects they need to learn, in order to plan the insertion of theoretical and practical teaching in the curriculum not only of the course nursing, but in other courses in the health area, and thus generate greater knowledge and skills.

CONCLUSION

In this study, we evaluated the knowledge of nursing students about breastfeeding, and explored the sociodemographic aspects of undergraduate nursing students and, despite the knowledge about the advantages of breastfeeding, knowledge was lower than expected in regards to the physiological process of breastfeeding. 🐣

References

1. Morcelli G, França EL, Magalhães VB, Damasceno DC, Calderon IM, Honório-França AC. Diabetes induced immunological and biochemical changes in human colostrum. *Acta Paediatr* 2011; 100(4): 550-6. DOI: 10.1111/j.1651-2227.2010.02070.x.
2. Moraes LL; Campos LA; Ferrari DVJ et al. Impacto da idade materna na acidez do colostro de nutrizes em maternidade do interior do Estado de São Paulo. *Journal Of Human Growth And Development*. 2019 29(2):153-160
3. Costa EFG, Alves VH, Souza RMP, et al. Atuação do enfermeiro no manejo clínico da amamentação: estratégias para o aleitamento materno. *Rev Fund Care Online*. 2018; 10(1): 217-223. DOI: <http://dx.doi.org/10.9789/2175-5361.2018.v10i1.217-223>
4. Abdala MAP. Aleitamento Materno como programa de ação de saúde preventiva no Programa de Saúde da Família. Universidade Federal de Minas Gerais. Faculdade de medicina. Núcleo de Educação em saúde coletiva, Uberaba, 10 Set 2016. Disponível em: www.nescon.medicina.ufmg.br/biblioteca/imagem/3141.pdf.
5. Chaves RG, Lamounier JA, César CC. Factors associated with duration of breastfeeding. *J Pediatr* 2007; 83(3): 241-246. DOI 10.2223/JPED.1610.
6. World Health Organization. Obesity: preventing and managing the global epidemic. Report of a WHO consultation, World Health Organization Technical Report Series. Geneva, Switzerland: World Health Organization; 2000.
7. Capucho LB, Lima RCD, Massaroni L, Primo CC. Fatores que interferem na amamentação exclusiva. *Rev Bras. Pesq. Saude*. 2017; 19(1): 108-113.
8. Arantes CIS, Montrone AVG, Milioni DB. Concepções e conhecimento sobre amamentação de profissionais da atenção básica à saúde. *Revista Eletrônica de Enfermagem*. 2008; 10: 4-6.
9. Badagnan, H.F; Oliveira HS. Conhecimento de estudantes de um curso de Enfermagem sobre aleitamento materno. *Acta Paul Enferm*. 2012; 25(5): 708-712.
10. Muniz, M.D. Benefícios do aleitamento materno para a puérpera e o neonato: atuação da equipe de saúde da família. Universidade Federal de Minas Gerais. Faculdade de medicina Núcleo de Educação em Saúde coletiva, 10 Set 2016. Disponível em: www.nescon.medicina.ufmg.br/biblioteca/imagem/2843.pdf.
11. Ministério da Saúde. Política Nacional de Alimentação e Nutrição 1. Ed. Brasília, DF: Editora MS; 2013/2014, 1(1) 28.
12. Venancio SI, Escuder MML, Saldiva SRDM, Giugliani ERJ. A prática do aleitamento materno nas capitais brasileiras e Distrito Federal: situação atual e avanços. *J. Pediatr*. 2010; 86(4):317-324.
13. Casagrande AA. Avaliação do conhecimento sobre aleitamento materno entre os alunos do último período dos cursos da área da saúde na Universidade Federal de Santa Catarina. (Trabalho de conclusão de curso) – Universidade Federal de Santa Catarina, Florianópolis, 26 Jun 2016.
14. Nakamura S. Percepção e conhecimento de meninas escolares sobre o aleitamento materno. *Jornal de Pediatria* – 2003; 79(2).
15. Caldeira AP, Aguiar GN, Magalhães WAC, Fagundes GC. Conhecimentos e práticas de promoção do aleitamento materno em Equipes de Saúde da Família em Montes Claros, Minas Gerais, Brasil. *Cadernos de Saúde Pública*, 2007.
16. Lelis L.S.C. Aleitamento materno exclusivo a criança até os seis meses de idade: avanços e desafios. Universidade Federal de Minas Gerais. Faculdade de Medicina. Núcleo de Educação em Saúde Coletiva. Conselheiro Lafaiete, 22 Agost 2016. Disponível em: www.nescon.medicina.ufmg.br/biblioteca/imagem/3401.pdf.