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Effects of educational intervention on knowledge of schools about breastfeeding

Efectos de la intervención educativa sobre el conocimiento de las escuelas sobre la lactancia materna

Efeitos de intervenção educativa no conhecimento de escolares sobre aleitamento materno

ABSTRACT

Objective: To compare the knowledge of schoolchildren about breastfeeding, before and after educational intervention. **Method:** a comparative, cross-sectional study, with a quantitative approach, carried out from March to October 2018 in municipal public schools in a municipality in Piauí, with 24 students aged 7 to 9 years. In this study, a pre-test was carried out to assess the knowledge of schoolchildren, an educational intervention using printed comic books and an educational game. After intervention, a post-test was applied, followed by a comparative analysis of knowledge in relation to breastfeeding. **Results:** out of the total number of interviewees in the pre-test, 12 obtained insufficient knowledge, 3 obtained good knowledge and none achieved optimal knowledge. After the educational intervention, it was found that no student had insufficient knowledge and 19 students were classified as having good knowledge. **Conclusion:** It was possible to observe an improvement in the levels of knowledge after the educational intervention.

DESCRIPTORS: Breastfeeding; school health services; knowledge; child.

RESUMEN

Objetivo: Comparar los conocimientos de los escolares sobre lactancia materna, antes y después de la intervención educativa. **Método:** estudio comparativo, transversal, con enfoque cuantitativo, realizado de marzo a octubre de 2018 en escuelas públicas municipales de un municipio de Piauí, con 24 alumnos de 7 a 9 años. En este estudio se realizó una prueba previa para evaluar los conocimientos de los escolares, una intervención educativa mediante cómics impresos y un juego educativo. Después de la intervención, se aplicó una prueba posterior, seguida de un análisis comparativo de conocimientos en relación con la lactancia materna. **Resultados:** del total de entrevistados en el pre-test, 12 obtuvieron conocimientos insuficientes, 3 obtuvieron buenos conocimientos y ninguno alcanzó conocimientos óptimos. Después de la intervención educativa, se encontró que ningún alumno tenía conocimientos insuficientes y 19 alumnos fueron clasificados como de buen conocimiento. **Conclusión:** se pudo observar una mejora en los niveles de conocimiento luego de la intervención educativa.

DESCRIPTORES: Lactancia Materna; servicios de salud escolar; conocimiento; niño.

RESUMO

Objetivo: Comparar o conhecimento de escolares sobre aleitamento materno, antes e após intervenção educativa. **Método:** estudo comparativo, transversal, com abordagem quantitativa, realizado no período de março a outubro de 2018 em escolas públicas municipais em um município piauiense com 24 escolares de 7 a 9 anos. Nesse estudo, foi realizado um pré-teste que avaliou o conhecimento de escolares, uma intervenção educativa com uso da história em quadrinhos impressa e jogo educativo. Após intervenção, aplicou-se pós-teste seguindo-se de análise comparativa do conhecimento em relação ao aleitamento materno. **Resultados:** do total de entrevistados no pré-teste, 12 obtiveram conhecimento insuficiente, 3 obtiveram bom conhecimento e nenhum alcançou o conhecimento ótimo. Após a intervenção educativa, constatou-se que nenhum escolar obteve conhecimento insuficiente e 19 escolares foram classificados com conhecimento bom. **Conclusão:** Foi possível observar uma melhora nos níveis de conhecimento após a intervenção educativa.

DESCRIPTORES: Aleitamento Materno; Serviços de Saúde Escolar; Conhecimento; Criança.

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INTRODUCTION

The benefits that the practice of breastfeeding offers to the mother-child dyad are undeniable, standing out among them, the reduction of infant morbidity and mortality, strengthening of the bond, in addition to being an ecological food and thus helping society to be healthier and more sustainable.⁽¹⁾ However, although there is proven evidence about these benefits, the literature points out that in low and middle income countries the prevalence of this practice is below 37% in children under six months.⁽²⁾

In the national scenario, only 9.3% of children are exclusively breastfed⁽³⁾, which suggests the need to think about educational interventions to improve this situation in the early stages of life, such as the school phase, in addition to intervening in various scenarios, such as the family and the

school environment.⁽⁴⁾

Today, there is a prevalence of interventions planned and performed in the pregnancy-puerperal cycle, which can be a limiting moment for adopting a future posture / attitude towards breastfeeding, because the sooner the population is informed about the importance of breastfeeding the greater the chances of positive decisions about this act.⁽⁵⁻¹⁷⁾ It is noted, then, that the planning and consolidation of educational strategies that can promote knowledge and culture of breastfeeding directed at school children is incipient.

Intervention studies using educational technologies⁽⁴⁾ have been shown to be effective in promoting the knowledge of school students about breastfeeding. As an example, a study carried out in Recife (PE), with elementary school children using educational technology like a board game, showed a positive effect when comparing knowledge about

breastfeeding between the intervention group and the control group.

In this scenario, especially when we analyze the actions of promotion and educational interventions that have a positive effect on the dissemination of knowledge and practice of breastfeeding, new resources have been used, among which the use of educational technologies as an instrument capable of making knowledge viable stand out. and arouse interest in the topic. Thus, materials such as educational comics are important vehicles of information in health promotion, besides being efficient in this process, they stimulate reflection in individuals, creating the opportunity for the recipient to transform their reality or the environment in which they are inserted.⁽⁶⁾

In this way, foster dialogue about breastfeeding in other phases, even if they are initial in the family and at school⁽⁷⁾, it can promote the adherence of positive

knowledge to health and contribute to the reduction of factors that interfere in the duration and maintenance of breastfeeding in a positive way.

However, in order to understand the real benefits achieved through the use of an educational instrument, it is necessary to compare prior knowledge and knowledge after the intervention. Therefore, this study emerged from the following question: what is the level of knowledge of students about breastfeeding, after the application of an educational technology?

Thus, this study aimed to compare the knowledge of students about breastfeeding, before and after educational intervention.

METHOD

It is a comparative study, with a quantitative approach, carried out in two schools in the municipal network of a city in the center-south of Piauí. Public elementary schools with the highest number of students enrolled were invited to participate in the study.

Data collection took place from March to October 2018. All students between 7 and 9 years of age were included. The sample calculation for comparison of subgroups within a sample depends on the statistical test chosen, the differences between the groups, the researcher's tolerance to the detection of differences when they do not exist (type I error) or the failure to detect differences between the subgroups when they really exist (type II error). The probabilities associated with types I and II errors are agreed as α and β , and commonly, values of 5% (bilaterally) and 20% are adopted, but other values can be used judiciously. Thus, through the sample calculation, 24 children were included in the study, of which they were selected through random drawing using the Random Selection Generator® application, in all classes with at least one student within the age group.

This study was carried out based on

the results of two surveys: 1. Where the knowledge of students aged 7 to 9 years was assessed through the application of a questionnaire containing open and multiple choice questions, related to socioeconomic data and knowledge about breastfeeding.⁽⁸⁾ 2. Construction and validation of educational material called "Comic strip: Learning about breastfeeding". The investigation of the students' knowledge was based on the comparison of knowledge before and after the application of the comic story.⁽⁹⁾

The comic magazine discusses what BF means for mammals and the importance of mother's milk for the baby's growth and development and other benefits, the inappropriate use of pacifiers and baby bottles, and cross-breastfeeding. In addition, myths about breastfeeding and the fundamental importance of the presence of the father or partner during BF were addressed.⁽⁹⁾

The students were divided into four groups with 6 participants in each one. Each group participated in two fortnightly meetings with the research team. In the first meeting, the content of the comic book was read and discussed. In the second meeting, an educational game created by the researcher and entitled "hopscotch" was developed. In this, the participants, using a dice made by the research team, threw it on the hopscotch. The hopscotch numbers corresponded to a question or a new chance to throw or skip ahead or return to the previous house. If the question was answered correctly, the candidate would remain in the numerical box. The one who first reached the end of the game was the winner.

Finally, the post-test form was applied for further analysis of the students' knowledge about BF, individually, with all students in the intervention groups. The questionnaire was administered in a private, comfortable and interference-free room.

The data were analyzed based on specific literature and statistical treatment, using the Microsoft Office Excel

2007® program and later exported to the Statistical Package for the Social Scienc (SPSS) version 20.0 for Windows® software.

The students' level of knowledge about BF was classified according to the following options: excellent, good, regular and insufficient. Considering the results obtained, the students' knowledge was classified as excellent when it reached > 76% of correct answers; good when the result reached between 51 to 75% of correct answers; regular, between 26 to 50% of correct answers; and insufficient <25% of correct answers.⁽¹⁰⁾ Student's t test was used for paired samples, the significance adopted was $p < 0.005$.

To carry out this research, all ethical principles contained in Resolution 466/12⁽¹¹⁾ which governs research involving human beings, were respected. Thus, the students who agreed to participate in the research, a Free and Informed Consent Term (ICF) was signed by their respective parents or guardians, in addition to a Free and Informed Consent Term (TALE) signed by the research subjects. The project was approved by the Ethics and Research Committee of the Federal University of Piauí at Campus Senador Helvídio Nunes de Barros, under number 1.840.137 and CAAE 59687916.7.0000.8057.

RESULTS

The results referring to sociodemographic data and knowledge before the educational intervention of students on breastfeeding are presented below.

Among the students surveyed, it was found that most students are 8 years old (58.3%), are enrolled in the second year of elementary school (62.5%), refer to brown color (50%), live in urban area of the city (91.7%) and have a family income less than or equal to a minimum wage (41.7%). In addition, among students, there was a greater participation of women (70.8%).

Table 1. Knowledge before the students' intervention about breastfeeding. Picos-PI, 2018 (n = 24).

VARIÁVEIS	ACERTOS		ERROS	
	F	%	F	%
Sabe até quando o bebê deve mamar só no peito.	8	33,3	16	66,7
Sabe até quando o bebê deve mamar no peito.	5	20,8	18	75,0
Sabe quando o bebê deve receber outros alimentos diferentes do leite do peito.	10	41,7	14	58,3
Acha que o bebê que mama só no peito deve tomar água.	17	70,8	7	29,28
Acha que o bebê que mama só no peito deve tomar chá.	13	54,2	11	45,8
Acha que o bebê que mama só no peito deve tomar suco.	7	29,28	17	70,8
Qual (ais) a(s) vantagens do aleitamento materno.	1	4,2	23	95,8
Acha correto dar outro tipo de leite que não o materno para o bebê.	12	50,0	12	50,0
Acha correto o uso de mamadeiras e chupetas por bebês.	4	16,7	20	83,3

Source: Research data.

Table 2. Students' post-intervention knowledge about breastfeeding. Picos-PI, 2018. (n = 24).

VARIÁVEIS	ACERTOS		ERROS	
	F	%	F	%
Sabe até quando o bebê deve mamar só no peito.	20	83,3	4	16,7
Sabe até quando o bebê deve mamar no peito.	4	16,7	20	83,3
Sabe quando o bebê deve receber outros alimentos diferentes do leite do peito.	10	41,7	14	58,3
Acha que o bebê que mama só no peito deve tomar água.	20	83,3	4	16,7
Acha que o bebê que mama só no peito deve tomar chá.	22	91,7	2	8,4
Acha que o bebê que mama só no peito deve tomar suco.	22	91,7	2	8,3
Qual (ais) a(s) vantagens do aleitamento materno.	8	33,3	16	66,7
Acha correto dar outro tipo de leite que não o materno para o bebê.	17	70,8	7	29,2
Acha correto o uso de mamadeiras e chupetas por bebês.	23	95,8	1	4,2

Source: Research data.

Graph 1. Pre and post intervention knowledge.



Source: Research data.

The students' knowledge after the educational intervention proved to be quite significant in relation to the previous one. Before the intervention, it was evidenced that out of the total of interviewees (n = 24), 12 obtained insufficient knowledge, 3 obtained good knowledge and none achieved excellent knowledge. After the educational intervention, it was found that no student had insufficient knowledge and 19 students were classified as having good knowledge (Graph 1).

The mean scores of children before and after the intervention were 10.42 and 64.58, respectively. According to the T test for paired samples, there was a difference in means before and after the educational intervention (p < 0.001).

DISCUSSION

In this research, the level of knowledge of schoolchildren about breastfeeding before and after educational intervention was compared.

It is known that students are not always exposed to the topic of breastfeeding on a daily basis, and there is a need for awareness of the importance of this practice. (12-5).

You can see that regarding the sociodemographic profile of the students surveyed, most of the participants were female (70.8%), brown (50%), 8 years old (58.3%) and lived in the urban area of city (91.7%).

As for the level of knowledge of students about breastfeeding assessed before the application of the educational intervention, it was found that the students surveyed did not obtain knowledge about the practice of breastfeeding. Most of these did not know how long a baby should be exclusively breastfed (66.7%) and 75% did not know, until when, should receive the mother's milk, as in a recent study conducted with Brazilian adolescents that showed similar results. (13)

Still, half of the interviewees thought it was correct to give another type of milk than the maternal milk to the infant. And almost all (83.3%) thought

the use of bottles and pacifiers by babies was correct, showing a lack of knowledge on the topic, as in a national study⁽¹⁴⁾ in which the majority of adolescents participating in the survey stated that they would provide pacifiers to their future children.

Regarding the importance of working on this topic in the school curriculum Research carried out in Coimbra, Portugal identified that the content on breastfeeding is present in the manuals from the 1st to the 4th year of the public education network, but approached in a superficial way. Although content favorable to breastfeeding was found, images of pacifiers and bottles were also identified. Such illustrations can reinforce a practice commonly witnessed by children and consequently reproduced in childhood games. This result is worrying because the use of pacifiers is considered a risk factor for interrupting exclusive breastfeeding and the use of artificial teats is associated with the absence of breastfeeding in the child's second half of life.⁽¹²⁻¹⁵⁾

In this study, despite the students' lack of knowledge about the duration and complementation of breastfeeding, almost all (95.8%) of those surveyed believe that the act of breastfeeding offers the infant some kind of advantage, but they did not know to mention any example. The valorization of breastfeeding was the topic in which there were the best scores, and breast milk was identified as the best food, with difficulties in pointing out specific aspects, such as duration of breastfeeding, different from that shown in a national survey of adolescents, where only 15% of the students was able to cite at least one benefit of breastfeeding children, such as increased intelligence scores.⁽¹⁴⁾

In this perspective, we can understand that through playing the child starts from an early age building his own values on breastfeeding and starts his preparation for activities that will be developed later in adult life⁽¹⁶⁾, therefore, this study proposed, through an educational intervention using a comic book and an educational game, to emphasize the importance of

In this perspective, we can understand that through playing the child starts from an early age building his own values on breastfeeding and starts his preparation for activities that will be developed later in adult life.

breastfeeding and to know the experiences of students about breastfeeding in a playful way.

It is necessary to highlight the role that the school plays in the process of critical training and in the construction of knowledge in the lives of citizens, observing the level of education and its correlation with the level of health of the population studied and of specific population groups such as children in the school phase. In addition, the school is an ideal environment for health promotion, since its audience is captive.⁽¹⁵⁻¹⁷⁾

When comparing the knowledge scores on the theme, it can be seen that after the interventions there was a significant improvement in knowledge, thus demonstrating that the educational intervention, using comic books and hopscotch, had a positive effect on the students' learning about breastfeeding. Thus, it is clear that the natural curiosity of children associated with the use of educational technologies as a vehicle of information relevant to public health, can be considered by other authors in the development of new research.

Thus, the need to insert the theme of breastfeeding in the family and in the school curriculum effectively becomes evident, since the decision to breastfeed requires an early and lasting contact with the theme.⁽¹⁸⁾

Numerous breastfeeding promotion programs are implemented in Brazil, however, new strategies are still needed that involve population groups capable of raising awareness and also being opinion makers. Children are considered a special group in the development of breastfeeding awareness. In addition to being reproducers of information, when adults can make positive decisions about breastfeeding and become social subjects in the fight in defense of health and life.

CONCLUSION

The promotion of school health carried out by this research proved to be advantageous for students to receive information about BF and to wake up to the need to

disseminate the content from an early age and progressively. These actions may encourage students to assume more conscious and healthy health behaviors, favor the development of positive attitudes to this practice, greater support for women

in the act of breastfeeding and, possibly, increase the future intention of these children to breastfeed and reflect on their success. breastfeeding.

Thus, through the data it was shown that students value breastfeeding, but

have little knowledge and some negative perceptions and beliefs regarding this practice. This information is important, and should be taken into account when developing strategies to promote BF among elementary school students. ■

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