The impact of an educational intervention on breastfeeding

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Abstract
Purpose – Given the importance of education-based approaches in stimulating breastfeeding, the paper aims to investigate the feasibility and efficacy of discussing breastfeeding with school children.
Design/methodology/approach – Two workshops about breastfeeding and on the view of the human being as a mammal were carried out in schools in Brazil. Children were invited to express their views of breastfeeding based on what they had learned. Questionnaires were applied immediately before and 15 days after the workshops to assess the impact on children’s knowledge.
Findings – There was on average a low level of knowledge about breastfeeding previous to the interventions. The interventions increased children’s self-perception as mammals, and managed to enhance their knowledge about several important issues regarding breastfeeding.
Research limitations/implications – There was a fairly small number of participants and a restricted age range. More studies with other age ranges are warranted.
Practical implications – Educative interventions on breastfeeding targeting young school children can have very positive results, suggesting that school could successfully include breastfeeding.
Originality/value – This is the first study to demonstrate the impact of this innovative approach on school children’s awareness on breastfeeding and it demonstrates this pedagogic approach to be effective.
Keywords Education, Schools, Children (age groups), Brazil

Introduction
Undoubtedly, maternal milk is the best feeding for young infants. It provides all the nutrients they need during the first six months of life, favors growth and development, is easily digested, avoiding cramps and nauseas, protects against infections, allergy and other diseases and is always available and ready for consumption at no cost (César et al., 1999; Feachem and Koblinsky, 1984; Lilus and Marnila, 2001; Oddy, 2001, 2002; Saarinen and Kajosaari, 1995). Furthermore, breastfeeding protects against post-delivery maternal hemorrhage, breast and ovarian cancer and, above it all, it is a gesture of love and endearment that strengthens the emotional connections between mother and child (Bernt and Walker, 1999). Early weaning is still an important problem affecting infants from developing countries, as early weaning is an important risk factor for malnutrition, diarrhea and other infectious diseases, it is an especially severe public health issue which affects poor children. Therefore, encouraging breastfeeding is a major basic health measure which, the World Health Organization (WHO, 1995) suggests, decreases morbidity and mortality of children younger than 5 years in developing countries.
There are many causes of early weaning, ranging from a simple cracked nipple to complex social and cultural issues, which may vary across different geographic areas – they include growing urbanization, the women’s role in modern society and the massive advertisement of milky products that suggest the maternal milk is not enough to supply all infant’s needs.

Education-based approaches can help promote and protect this practice. There is a profusion of reports on breastfeeding education with nurses, pregnant women and mothers (Cantrill et al., 2003; Hellings and Howe, 2000, 2004; Lewinski, 1992), but little research to promote breastfeeding among children. However, it seems sensible to suggest that schools could be helpful in influencing children’s long-term attitudes towards breastfeeding, as studies have shown how significant the school can be in giving opportunities for children to learn about a wide range of health practices (Meridiew, 1997; Oliveira, 1990; Kuyumjian, 1992; Pereira, 1999).

The purpose of this paper is to assess the feasibility and efficacy of discussing breastfeeding with school children. It reports research which used an educative, creative and positive approach.

Methods
To assess the impact of discussing breastfeeding with school children aged 7-12 year-old, we carried out two workshops addressing its importance in two different classes (W1 and W2 groups) of a school in Ilhéus, State of Bahia, Brazil. Groups W1 and W2 had 16 students each W1 had 6 boys and 10 girls, W2 had 8 boys and 8 girls.

Initially, both workshops sought to increase children’s knowledge about the idea of human beings as essentially mammals. A short dialogue was performed using an image-based educative material prepared especially to the workshops. The material presented the mammals as a special class of animals, described them briefly, stressing the importance of breastfeeding to them, and provided examples of mammals, such as dogs, cats, rabbits, giraffes, elephants and human beings. Afterwards, children were asked to express in drawings and in modeling mass their views of breastfeeding based on what they had learned, providing an explicative sentence with the drawing. Children were asked to present their creations to the class and a discussion about the different presentations ensued.

Artistic expression is an important way of spontaneous communication on that age range, which may help to uncover unconscious concepts, interpretations and beliefs (Kuyumjian, 1992). Using imagery may be particularly appropriate for this age group, because learning at that age is based on concrete and material data and on direct experience, thus leading to the formation of logic-concrete schemes typical of that age but that persist during the later phases of life (Piaget, 1991).

Workshop 2 had an extra step after the dialogue and before children’s expression – three mothers breastfed their children so that all children could watch the whole process.

Children’s knowledge about breastfeeding was assessed by the application of a questionnaire immediately before the workshops (pre-test) and the re-application of the same questionnaire 15 days after (post-test). The questionnaire comprised eight questions addressing diverse aspects of the importance of breastfeeding. To assure maximum liberty on answers, no identification was requested on the questionnaire.
The results were compared with those from another class who did not take part in any workshop (group C), which had 13 children (seven boys and six girls).

The questions of the questionnaire are presented in Table I.

The study protocol was approved by the Ethics Committee of Professor Edgard Santos University Hospital, Federal University of Bahia and by the Principal of the school where the practices took place.

Results
All children from the three classes agreed voluntarily to participate in the study and the workshops.

The drawings and models made by most children were related to the content of the activity, but those of a few were unrelated (large buildings, a waterfall, trees, Jesus Christ). The drawings and models which were relevant could be divided into three major groups:

1. mammals (many children drew or modeled several mammals, including, human beings);
2. mother and child (the link between mother and children of different ages was depicted by many children); and
3. breastfeeding (breastfeeding was a very common theme of drawings and mass models on both groups, with not only humans were depicted but also many other mammals).

Sentences reinforcing the importance of breastfeeding were common with the drawings, such as “Breast milk makes the baby grow strong and beautiful.” “All children must be breastfed so that they will not be malnourished” “Breast milk is the best for the baby” and “The baby is a mammal because he feeds from the mother’s breast.”.

All children answered the questionnaire. Table II provides an overall view of the results.

Both the workshops increased children’s self-perception as mammals, as demonstrated by comparing the rate of correct answers to question 1 of control and intervention groups. Adequate knowledge about infant’s feeding (question 2) was particularly low in all groups before the intervention, and both workshops nearly doubled the rate of correct answers. Most children were aware of the importance of

<table>
<thead>
<tr>
<th>Serial no.</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Are you a mammal? Why?</td>
</tr>
<tr>
<td>2</td>
<td>Which are the most important feeds for the baby?</td>
</tr>
<tr>
<td>3</td>
<td>Is breastfeeding important? Why?</td>
</tr>
<tr>
<td>4</td>
<td>Did your mother breastfed you?</td>
</tr>
<tr>
<td>5</td>
<td>Who is responsible for the success of breastfeeding?</td>
</tr>
<tr>
<td>6</td>
<td>Has anybody ever talked to you about the importance of breastfeeding?</td>
</tr>
<tr>
<td>7</td>
<td>How can we increase the period of breastfeeding?</td>
</tr>
<tr>
<td>8</td>
<td>How would you like your own children to be fed?</td>
</tr>
</tbody>
</table>

Table I. Questions used to assess children’s knowledge before and after the intervention
breastfeeding (question 3) before the intervention, but the intervention succeeded in raising awareness to 100 percent in both groups. The majority of children (78.0 percent) reported having been breastfed by their mothers (question 4). This might suggest that the topic breastfeeding had been talked about at home. However, only 44.4 percent of all children reported having been talked to about breastfeeding before our intervention (question 6), leading to the conclusion that children were able to reach the conclusion that they had been breastfed without ever being told so.

Question 5 asked who was responsible for the success of breastfeeding. We considered the best answer to be “all of us” and only a very low percentage of children provided that answer even after the intervention. Most of the children saw the mother as the responsible for the success of breastfeeding (either alone or together with other people), but very few considered the father, the school or the whole family responsible for success.

The lowest success rate was achieved in question 7 (Table II), which addressed the prolongation of breastfeeding period. About 20 out of 32 (62.5 percent) children who took part in the workshops did not answer that question on the post-test, in did not answer that same question (only slightly better than the control group where it was 10 out of 13 (76.9 percent)). Most children who answered the question provided answers that suggested they did not understand the question. Only a few children saw a need to support the mother to increase the period of breastfeeding.

Children were more likely to say that babies should be exclusively breastfeed (question 8) after the workshop (6.2–37.5 percent) than children in the control group, for whom there was no change. About 18.8 percent answered of the experimental group said they would feed their children with maternal milk and other foods and other 18.8 percent answered “milk” not specifying whether that would be maternal or artificial milk. However, the rate of children who did not list any kind of milk on the diet with which they would like their children to be fed remained unchanged at 21.9 percent of children who took part in the workshops in both pre- and post-tests (data not shown). Unanswered questions accounted for 28.1 percent on the pre-test and 6.2 percent on the post-test. On the control group, rates for non-milky diet were 38.4 and 46.1 percent in pre- and post-tests, respectively, while rates of unanswered questions were 15.3 and 30.7 percent, respectively.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Workshop 1 (n = 16)</th>
<th>Workshop 2 (n = 16)</th>
<th>Control group (n = 13)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-test percent</td>
<td>Post-test percent</td>
<td>Pre-test percent</td>
</tr>
<tr>
<td>1</td>
<td>5 (31.2)</td>
<td>16 (100)</td>
<td>6 (37.5)</td>
</tr>
<tr>
<td>2</td>
<td>6 (37.5)</td>
<td>10 (62.5)</td>
<td>4 (25.0)</td>
</tr>
<tr>
<td>3</td>
<td>15 (93)</td>
<td>16 (100)</td>
<td>13 (81)</td>
</tr>
<tr>
<td>4</td>
<td>11 (68)</td>
<td>11 (68)</td>
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<tr>
<td>5</td>
<td>1 (6.2)</td>
<td>1 (6.2)</td>
<td>1 (6.2)</td>
</tr>
<tr>
<td>6</td>
<td>8 (50)</td>
<td>11 (68.8)</td>
<td>6 (37.5)</td>
</tr>
<tr>
<td>7</td>
<td>0</td>
<td>3 (18.7)</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>7 (43.8)</td>
<td>1 (6.2)</td>
</tr>
</tbody>
</table>

Table II. Amount of children who answered the questions of the questionnaire properly on the different study groups

Note: “Yes” was considered to be the proper answer to questions 4 and 6.
Discussion and conclusions
Strengthening the awareness of the importance of breastfeeding is crucial to decrease childhood morbidity and mortality rates, chiefly in developing countries, and children can play a positive role on that issue. Schools and the whole process of teaching and learning are relevant opportunities to promote health (Pillar, 1996; Piaget, 1991; Organizacion Panamericana de la Salud (OPAS), 1998). Children will soon become adults who will be able to further spread correct information about breastfeeding learned at school to their families and neighbors. (UNICEF/OMS/UNESCO/FNUAP, 1993; Organizacion Panamericana de la Salud (OPAS), 1998).

It would appear that the intervention positively influenced children’s ideas about breastfeeding. This study demonstrates that educational interventions on breastfeeding targeting young school children can have very positive results, increasing the awareness of the importance of breastfeeding and confirming the school as a significant setting for health education. All children were interested, excited, motivated and involved on the workshops. Girls had higher baseline knowledge about aspects related to breastfeeding, which could be expected based on the closer proximity to their mothers as compared to boys.

This study reinforces the need to use approaches that are especially designed for young children while teaching about health. During drawing and modeling workshops, the authors were able to observe children’s knowledge and ideas about breastfeeding developing. The use of imagery appeared to be a useful research tool in this context and with this age group. Using such creative and artistic methods may be useful for other topics and in other contexts, and help to link with teaching and learning methods used in schools. This is the first study developed with this innovative approach to increase school children’s awareness on breastfeeding and its results demonstrate the efficacy of this approach. Training teachers on the use of creative and positive techniques to diffuse knowledge on health issues to school children could bring results, with even quite complicated topics being approached (OMS, 1996; Vieira, 2002).

References


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