

Evaluation of a pregnant guidance program

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Abstract

The aim of the present study was to assess ability of pregnant women (n=82) to acquire guidance on breastfeeding, baby's sucking habits, and oral hygiene. Subjects were interviewed before and after their enrolment in the pregnancy orientation program at Piracicaba Dental School, University of Campinas (UNICAMP). Results showed that all subjects improved their knowledge on all behavior aspects as well as their ability to follow guidance offered in this study. Information provided during the pre-natal period seems to help reduce incidence of early introduction of foods and weaning. To guarantee the success of programs designed to assist pregnant women, it is wise to use a systematic follow-up to motivate mothers after childbirth to keep up with guidance given in such programs, concerning not only information, but also emotional and instrumental support.

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Introduction

Health professionals should make better use of the improved receptive ability that women have during pregnancy to absorb and use acquired knowledge¹.

Because women have an important role in promoting family health, there has been a growing interest in the functional effects of institutional programs aiming at women's health. Therefore, educational programs concerning pregnant women seem to be efficient in promoting health and preventing several health-related problems, resulting in a potential reduction in public expenses on healing treatments².

Pregnant women have been reported to hold little knowledge of gestation care, prenatal attendance, infant's health, and breastfeeding³.

The most crucial information they lack is on the breastfeeding aspects, such as breast preparation, breast milk sucking, breastfeeding effects on the cognitive and affective development of their babies, and mother-baby attachment⁴⁻⁵. Most children are been exposed to pacifier use and bottle-feeding during the first two months of life when weaning prevalence is significantly high⁶. This supports the need for pregnancy guidance programs to better inform women of the potentially adverse consequences of these habits, as well as to encourage them to breastfeed their infants until the age of six months.

Peres et al.⁷ reported that most pregnant women do not have enough access to information about tooth decay transmission and the necessary care with their oral hygiene and that of their future babies. These authors found that the quality of oral health during pregnancy is directly related to the mothers' general health conditions, which may affect their babies as well. Also, tooth decay incidence in babies has been observed to reduce when mothers are submitted to health guidance programs.

According to Quayle et al.⁸, an adequate planning of educational programs, aiming at pregnant women and newly mothers, would be fundamental. However, Oliveira and Camacho⁹ observed that mothers' knowledge might be insufficient for the accomplishment of oral health behaviors in relation to their children. Also, these authors suggested that breastfeeding is a primary prevention action related to oral health, and therefore it should be included in pregnancy guidance programs to prevent or even postpone early weaning.

Mothers' misinterpretation of the quantity and quality of their own milk production might result in breastfeeding interruption. César et al.¹⁰ described that some mothers, alleging "weak milk" production, offered other types of food, such as water and tea. Also, these foods contain no nutritional or biological values, but they make their children feel full, resulting in a lower consumption of milk and in precocious weaning. According to Bittencourt et al.¹¹, breastfeeding fulfills the baby's sucking needs, preventing the use of milk bottles

and pacifiers, which are responsible for a large number of craniofacial alterations.

Sucking habits can either lead or result in early weaning. The first situation might be due to different sucking patterns between breast and bottle feeding, suggesting that babies prefer bottle-feeding to chest feeding, resulting in early weaning¹². On the other hand, bottle-feeding only fulfills the baby's physiological hunger, but not its sucking needs. Therefore, it is often followed by pacifier use¹³. Pregnancy guidance programs should provide mothers with appropriate information about the consequences of these habits, motivating them to breastfeed their babies until six months of age.

The aim of this study was therefore to evaluate pregnant women as to their knowledge about breastfeeding, sucking habits, and oral hygiene concerning their babies, based on a lecture offered by the Dental Research and Treatment Center for Special Patients at the Dental School of Piracicaba – UNICAMP.

Material and Methods

Data collection was made using identical questionnaires to interview 84 pregnant women enrolled in the Pregnancy Guidance Program, developed by the Center of Dental Research and Treatment for Special Patients at the Dental School of Piracicaba, University of Campinas (UNICAMP). Knowledge level of the pregnant women interviewed was evaluated before and after the educational lecture offered in the guidance program to identify their intention to change behavior. Data analysis was based on the number of mothers who changed their opinions and revealed intention of following the instructions offered. For each question analyzed, the compliance percentage was calculated using the following formula: $A - B \times 100 / C$, where **A** refers to the number of mothers who revealed the intention to follow the instructions offered; **B** the total number of mothers who, before the lecture, had an opinion compatible with the instructions given; and **C** the number of mothers who, before the lecture, had presented with an opinion incompatible with the instructions given.

The Research Ethics Committee of Piracicaba Dental school (UNICAMP) approved this research project. All subjects accepted to participate by giving written consent, according to the specifications described in Resolution no. 196/96 of the Brazilian Health Council.

Results

An increase of 73% in the mothers' disinterest in milk bottle-feeding was observed after the lecture. Before the lecture 40% of the mothers were not interested to bottle feed their babies and after it the percentage increased to 84%.

Mothers' justification for interrupting bottle-feeding was as follows: "to give the baby tea" and "need to return to work".

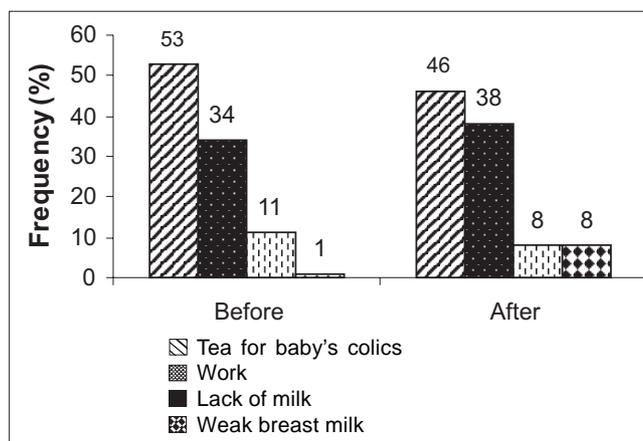


Fig. 1 - Reported reasons for bottle-feeding.

An increase of 68% in the mothers' disinterest in offering pacifiers to their babies was observed after the lecture. The "baby's cry" was the main reason mothers gave to justify pacifier use.

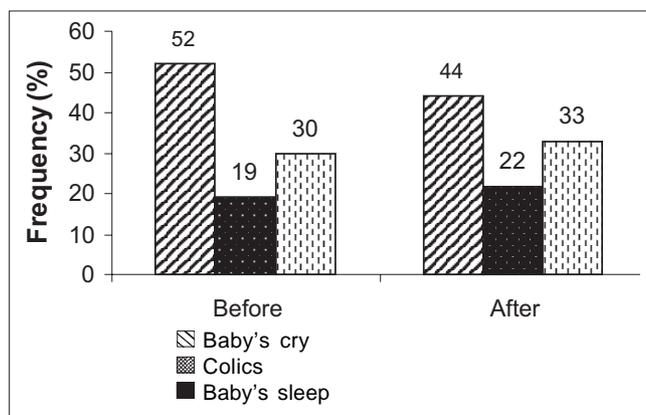


Fig. 2. Reported reasons for offering pacifier.

Mothers (81%) showed compliance with the guidance offered instructing babysitters to give babies breast milk in glasses in the absence of mothers. This might explain the reduction in mothers' preference to cow milk bottle-feeding (fig. 3)

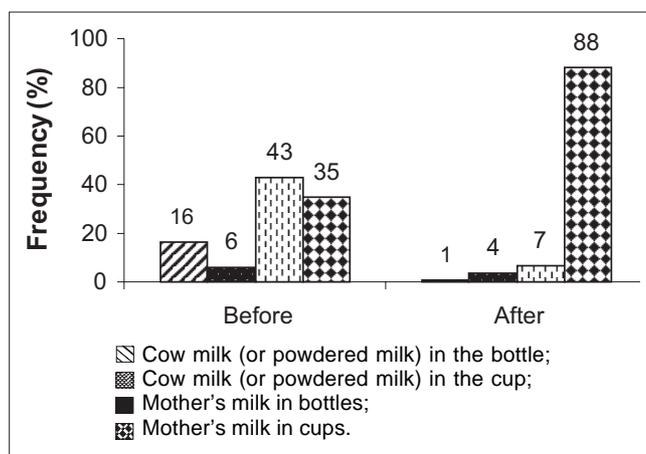


Fig. 3 - Relative frequency of pregnant women who reported what baby-feeding foods they would use in their absence.

Sixty-six percent of mothers reported starting oral hygiene during their babies' first two months of life (figure 4).

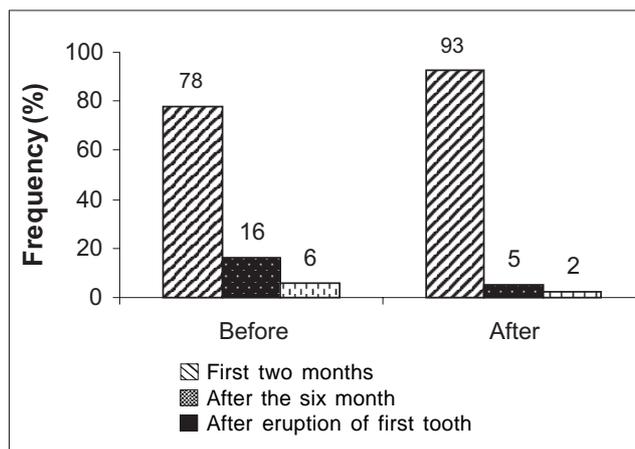


Fig. 4 - Relative frequency of pregnant women who reported when they would start baby's oral hygiene.

Discussion

Bottle-feeding is widely accepted among families and even stimulated by the media and some health professionals. In the present study, 40% of the mothers reported no intention of bottle-feeding their babies before the lecture¹⁴. Sixteen percent of the pregnant women kept the intention of bottle-feeding their babies even after receiving information about the potential damage it might cause (Figure 1).

The pregnant women justified choosing bottle-feeding as follows: (a) to offer tea to their babies during colic crises; (b) to complement breastfeeding; and (c) to return to work. For many decades, pregnant women and mothers have been instructed to bottle-feed their babies under the circumstances above, especially in cases in which milk formulas were prescribed in the hospital environment. This was part of a marketing strategy that baby food companies used to motivate the early interruption of breastfeeding.

These companies, having a strong influence on medical professionals, would promote their products by giving away milk powder and bottles. As a result, mothers established a common belief that the use of bottles to feed their babies with tea and milk formulas would provide benefits for the baby.

Despite an increasing effort and nationwide campaign to encourage breastfeeding, initiated in the 1980's, there is still a strong need for the incorporation of such knowledge into the health system to better inform the lay population and health professionals. Accordingly, Scott and Mostyn¹⁴ reported that bottle-feeding has a strong socio-cultural influence, suggesting a need for a specific follow-up after baby's birth involving the pregnant women who had the intention of bottle-feeding.

Mothers showed a lower compliance level towards the

orientation of not offering pacifiers than that of not offering bottles. This difference might be due to the mother's knowledge about other alternative feeding methods, such as the use of a cup or spoon. The nutritional need of the child will then be fulfilled, independent of the feeding method used to reduce the frequency of the baby's cry. However, mothers find no alternative, other than pacifiers, to reduce or eliminate weeping.

In this study, the baby's cry was the most frequent reason for the use of pacifiers, revealing that crying is a strong anxiety factor, especially among the primiparous mothers, who represent 78% of our sample. Crying occurs with greater frequency during the baby's first two months of life, when the mother still has not acquired enough ability to identify its cause. Inexperienced mothers' anxiety concerning their lack of confidence in managing maternal functions may lead to early pacifier use¹⁵. The pacifier, which initially reduces weeping, does not solve the problem and may lead to a delay in aiding their babies during colic crises or sucking inability, which are frequent during the baby's first two months of life. The pregnant women in this study showed a high compliance level to the orientation of offering maternal milk in cups, suggesting a need for providing information about the benefits of breastfeeding and strategies for the maintenance of this practice.

Mothers reported the need to return to work as the main reason to interrupt breastfeeding¹⁶. Offering breast milk in cups or spoons would be an alternative to prevent the early introduction of foods, other than breast milk, to the baby's diet. In cases of their absence, mothers are instructed to milk their breasts and store it in a refrigerator to preserve its nutritional and immunologic properties. When present, mothers are able to breastfeed their babies, and consequently, stimulate a good mother/child relationship, as well as the production of an adequate amount of milk through suction. Breast milk offered to the baby in a cup may prevent confusion between nipple and bottle and guarantee continued breastfeeding.

The Pregnancy Guidance Program used in the present study encouraged pregnant women to start baby's oral hygiene during the first two months of life, creating a new habit. This early introduction of oral hygiene reduces the number of microorganisms responsible for the development of oral diseases.

Information provided during the pre-natal period seems to help reduce incidence of early introduction of foods and weaning. However, pregnant women in the present study showed their intention of following the instructions offered by the professionals responsible for the Program. Although this guarantees no compliance during the after-birth period, the results obtained in this study suggest that health professionals should have an active role toward health behaviors pregnant women might develop during such period.

To guarantee the success of programs designed to assist pregnant women, it is wise to use a systematic follow-up to motivate mothers after childbirth to keep up with guidance given in such programs, concerning not only information, but also emotional and instrumental support.

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