







Content validation and semantic analysis of a KAP survey on grandmothers' knowledge, attitudes, and practices in the context of breastfeeding

Validação de conteúdo e análise semântica de inquérito CAP sobre conhecimentos, atitudes e práticas das avós no contexto da amamentação

Validación del contenido y análisis semántico de una encuesta CAP sobre conocimientos, actitudes y prácticas de las abuelas en el contexto de la lactancia materna

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ABSTRACT

Objective: assessing the content and semantic validity of a survey on grandmothers' knowledge, attitudes, and practices in the context of breastfeeding. **Methods:** methodological research for content validation of a Knowledge, Attitudes, and Practices (KAP) survey by experts and semantic analysis through the comprehensibility of the items by grandmothers of breastfeeding children. Content validity indices were calculated for the items and the scale, as well as the binomial test. Absolute and relative frequencies of understanding of the items were calculated for the semantic analysis. **Results:** participants were 22 experts and ten grandmothers. The content validity index of the KAP survey for both the pre-test and post-test versions was 0.94. One question in the pre-test version and two questions in the post-test version did not reach > 90% comprehension. One question was excluded from the survey and 21 were reworded, resulting in 45 items distributed into three domains: knowledge (23 items), attitudes (8 items), and practices (14 items). **Conclusion:** the final pre- and post-test versions of the survey of grandmothers' knowledge, attitudes, and practices on breastfeeding achieved content and semantic validity compatible with its use.

Descriptors: Nursing; Health Knowledge, Attitudes, Practice; Breast Feeding; Grandparents.

RESUMO

Objetivo: avaliar a validade de conteúdo e a semântica de um inquérito sobre conhecimentos, atitudes e práticas das avós no contexto da amamentação. **Métodos:** pesquisa metodológica, de validação de conteúdo de inquérito Conhecimentos, Atitudes e Práticas (CAP) por especialistas e análise semântica por meio da compreensibilidade dos itens pelas avós de crianças em amamentação. Foram calculados os índices de validade de conteúdo, dos itens e da escala, e teste binomial. Para análise semântica foram calculadas as frequências absolutas e as relativas da compreensão dos itens. **Resultados:** participaram 22 especialistas, e dez avós. O índice de validade de conteúdo do inquérito CAP tanto para versão pré-teste como pós-teste foi de 0,94. Uma questão da versão pré-teste e duas questões da versão pós-teste não alcançaram compreensão > 90%. Foi excluída uma questão do inquérito e 21 foram reformuladas, resultando em 45 itens distribuídos em três domínios: conhecimentos (23 itens), atitudes (oito itens) e práticas (14 itens). **Conclusão:** as versões finais do pré e pós-teste do inquérito de conhecimentos, atitudes e práticas das avós sobre a amamentação, alcançaram validade de conteúdo e de semântica compatível para sua utilização.

Descritores: Enfermagem; Conhecimentos, Atitudes e Prática em Saúde; Aleitamento Materno; Avós.

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RESUMEN

Objetivo: evaluación de la validez semántica y de contenido de una encuesta sobre conocimientos, actitudes y prácticas de las abuelas en el contexto de la lactancia materna. **Métodos:** investigación metodológica, validación del contenido de la encuesta Conocimiento, Actitudes y Prácticas (CAP) por expertos y análisis semántico a través de la comprensibilidad de los ítems por abuelas de niños lactantes. Se calcularon índices de validez de contenido para los ítems y la escala, así como la prueba binomial. Para el análisis semántico, se calcularon las frecuencias absolutas y relativas de comprensión de los ítems. **Resultados:** participaron 22 expertos y diez abuelas. El índice de validez de contenido de la encuesta CAP, tanto para la versión pre-test como para la post-test, fue de 0,94. Una pregunta de la versión pre-test y dos preguntas de la versión post-test no alcanzaron > 90% de comprensión. Se excluyó una pregunta de la encuesta y se reformularon 21, con lo que se obtuvieron 45 ítems distribuidos en tres ámbitos: conocimientos (23 ítems), actitudes (8 ítems) y prácticas (14 ítems). **Conclusión:** las versiones finales pre y post de la encuesta sobre conocimientos, actitudes y prácticas de las abuelas en materia de lactancia materna alcanzaron validez de contenido y semántica compatible con su uso.

Descriptor: Enfermería; Conocimientos, Actitudes y Práctica en Salud; Lactancia Materna; Abuelos.

INTRODUCTION

Breastfeeding not only nourishes but also protects the child's health and benefits the family, society, and the environment. This practice is, therefore, an efficient and low-cost strategy for preventing infant morbidity and mortality⁽¹⁾. Despite the benefits of breastfeeding, many factors interfere with its establishment during the first two years of a child's life. Among these is the influence of the social network in supporting the nursing mother⁽²⁾.

The theory that emerged from a meta-synthesis revealing the type of support offered during breastfeeding shows that, among the members of the social network, the child's grandmothers play a central role in the family unit due to the experiences they carry with them⁽²⁾. Through their knowledge, attitudes, and practices, grandmothers guide their daughters' and daughters-in-law's breastfeeding, offer the necessary support for successful breastfeeding and/or promote the discouragement of this practice through opposing opinions and inappropriate guidance⁽²⁾.

Despite this finding, most educational activities are aimed at pregnant/nursing mother, those directly involved in the target behavior, without considering who influences their decisions⁽³⁾. A study carried out in Nepal with 1,399 children between six and 24 months old showed that children whose grandmothers had adequate knowledge about colostrum, early initiation of breastfeeding, and complementary feeding were more likely to achieve the best breastfeeding and infant feeding rates. This finding attests to the relevance of involving grandmothers in health interventions⁽⁴⁾.

Educational activities, in turn, need to be congruent with the population's needs. To better identify these needs, health professionals can use tools, including the Knowledge, Attitudes, and Practices (KAP) survey, designed for specific health situations and diseases/illnesses. This meth-

odological approach is used to understand the levels of knowledge, attitudes, and practices of a given public and thus provide professionals with information for planning and evaluating health interventions⁽⁵⁾. The use of KAP as an educational technology is based on the premise that promoting knowledge creates a positive attitude capable of improving appropriate health practices⁽⁶⁾.

In this sense, this study set out to assess the content validity and semantics of a survey on the knowledge, attitudes, and practices of grandmothers in the context of breastfeeding.

For the purposes of the definition adopted in this study, knowledge is the understanding of a subject that results from experience or learning, used to solve problems or issue concepts. Attitude is linked to the affective domain, whose tendency to judge is based on feelings, predispositions, and beliefs about a particular subject. Practice refers to how an action is carried out based on an individual's knowledge and attitudes^(7,8).

METHODS

This is a methodological study⁽⁹⁾, in which a KAP survey of grandmothers in relation to breastfeeding was initially drawn up, based on data from a meta-synthesis⁽²⁾, an integrative review⁽¹⁰⁾, and a dissertation⁽¹¹⁾ on the subject.

The KAP survey was formulated in two versions called pre-test and post-test, to be applied before and after an educational activity. Both versions measure the same aspects and have the same level of complexity, but differ in the wording to avoid grandmothers memorizing the answers and, consequently, test bias⁽¹²⁾.

The sample of expert judges for the content validation of the pre- and post-test items was calculated considering a 95% confidence level, a minimum pro-

portion of experts to consider the item as adequate of 85%, and a degree of precision of the estimate of 15%, totaling 22 judges⁽¹³⁾.

The experts were selected through the Lattes Platform of the National Council for Scientific and Technological Development (CNPq), considering the area of interest of the study, based on the requirements: having specialized knowledge or skills, extensive experience in the field of practice, highly developed levels of pattern recognition and acknowledgment by other individuals⁽¹⁴⁾. Criteria were established for each requirement and the judges selected had to meet at least one criterion in each of the requirements.

The knowledge or skills required to evaluate the KAP survey were assessed by analyzing academic training/titles and experience in woman's health, children's health, or health education, with an emphasis on breastfeeding. Practical experience included professional experience, participation in courses, teaching, extension, research and experience in health education. Pattern recognition, understood as skills in a particular type of study, was assessed through the publication of scientific articles and participation in the construction or evaluation of educational technology. Acknowledgment by other individuals was assessed using the snowball sampling technique, in which the selected judge nominated another with experience in the field of study.

A total of 44 judges were recruited and invited to participate in the study. They received an invitation letter by email and, after accepting it, were sent a link to the Google form containing an informed consent, an instrument for characterizing the participants, and the form for evaluating the items in the two versions of the KAP survey. The form was structured to measure the proportion of judges who considered the items adequate in terms of their clarity and the importance of the questions in describing aspects of breastfeeding. In addition, the suitability of the vocabulary for the target audience and the logical presentation of the questions were assessed.

When assessing the degree of relevance, the judges marked the alternative that best represented the item being analyzed, namely:

1. Irrelevant,
2. Not very relevant,
3. Fairly relevant,
4. Relevant, and
5. Very relevant.

Finally, they checked the correlation of each of the questions in the pre- and post-test in terms of content, objective, meaning, and level of complexity.

The Statistical Package for the Social Sciences (SPSS) software (version 20.0, IBM®, Chicago, USA) was used to analyze the data. The Content Validity Index (CVI) was assessed by calculating the Item-Level Content Validity Index (I-CVI), which refers to the proportion of experts who rate the item's relevance as 3 or 4; and the Scale-Level Content Validity Index, Average Calculation Method (S-CVI/AVE), which is the average of the I-CVI scores for all the items in the scale⁽⁹⁾.

The binomial test was applied to assess the proportion of judges who considered the item adequate or not. The parameter used to calculate the CVI and the binomial test was agreement and/or adequacy equal to or greater than 85% and a significance level of 5%. Items that did not reach 85% were reworded according to the experts' suggestions before the semantic analysis.

The semantic analysis of the pre- and post-test versions of the KAP survey was carried out by means of individual interviews with 10 grandmothers who accompanied their daughters or daughters-in-law during their stay in the rooming-in unit of a university hospital in the city of Recife (PE). The KAP survey was administered to the grandmothers and their understanding of each of the items was checked. Questions that required repetition were recorded, i.e. doubts about a specific word in the item or failure to understand the question. The data was analyzed by calculating absolute and relative frequencies and the questions with less than 90% understanding were reformulated⁽⁹⁾.

The research project was approved by the Research Ethics Committee of the Health Sciences Center of the Federal University of Pernambuco, Certificate of Presentation for Ethical Consideration (In Portuguese: Certificado de Apresentação de Apreciação Ética – CAAE) No. 68127317.2.0000.5208.

RESULTS

The initial pre-test and post-test versions of the KAP survey had 46 items each. Each item allowed only one appropriate answer according to the scientific evidence from the sources consulted, with each question answered appropriately being given a value of one and those answered inappropriately, zero. The score in the knowledge domain can vary from zero to 24, in the attitude domain from zero to eight, and in the practice domain from zero to 14 (Chart 1). In the end, it is possible to measure the score obtained in each of the domains.

Twenty-two judges who met the inclusion criteria participated in the content validation. They were predominantly female (95.5%), with an average age of 44.5

Chart 1 - KAP survey – knowledge, attitudes, and practices – of grandmothers on breastfeeding, original pre- and post-test versions, before content validation and semantic analysis, Recife, Pernambuco, Brazil, 2019

Pre-test version	Post-test version
Knowledge	Knowledge
1 - Do you know who wins when the mother breastfeeds?	1 - Can you tell who benefits from breastfeeding?
2 - Have you ever heard that children who breastfeed get sick less often?	2 - Can you tell if breastfeeding protects the child against diseases?
3 - Have you ever heard that breastfeeding protects the mother's health?	3 - Have you ever heard that when a mother breastfeeds, she is protecting her health against several diseases?
4 - Have you ever heard that breastfeeding increases the bond between mother and child?	4 - Can you tell if one of the advantages of breastfeeding is that it increases the bond of love between mother and child?
5 - Can you tell if the first milk that comes out of the mother's breast, colostrum, is good for the child's health?	5 - Can you tell if, by receiving the first milk that comes out of the mother's breast, colostrum, the child is being protected against diseases?
6 - Can you tell if breastfeeding woman needs a different diet from woman who is not breastfeeding?	6 - Can you tell if it is necessary to change the diet when a woman is breastfeeding?
7 - Have you ever heard that there is some kind of food that increases the amount of milk?	7 - Can you tell if the increase in the amount of milk depends on any food?
8 - Can you tell if the mother's body produces as much milk as the child needs?	8 - Have you ever heard that a mother does not need to give another type of milk because her body is capable of producing all the milk the child needs?
9 - Have you ever heard that breastfeeding woman needs to drink more water a day?	9 - Can you tell if it is necessary to drink more water when a woman is breastfeeding?
10 - Do you know if there is a type of breast beak in the women, the nipple, that helps with breastfeeding?	10 - Have you ever heard that the ease of breastfeeding depends on the type of breast beak and the nipple of the woman?
11 - Do you know from what age a child breastfeeding only on breast milk should be given water?	11 - Can you tell how old a child who only breastfeeds should be given water?
12 - Do you know until what age a baby should only breastfeed without being given water, tea or other foods?	12 - Can you tell until what age a child should be fed only its mother's milk?
13 - Do you know from what age a child can drink tea?	13 - Can you tell at what age a child can be offered tea by a mother?
14 - Have you ever heard that pacifiers can interfere with breastfeeding?	14 - Have you ever heard that a pacifier can confuse a child and make them not want to breastfeed anymore?
15 - Have you ever heard that bottles can interfere with breastfeeding?	15 - Have you ever heard that a child who uses a bottle may no longer want to breastfeed?
16 - Do you know what to do when your breasts are engorged?	16 - Can you tell what can be done when a woman's breasts are engorged?
17 - Do you know what to do when the nipple, breast beak, is cracked?	17 - Can you tell what can be done to treat a cracked nipple?
18 - Do you know how women can take care of their breasts while they are breastfeeding?	18 - Do you know the care women should take to keep their breasts clean?
19 - Can you name the people who can help a woman who is breastfeeding?	19 - Do you know who can do something to support breastfeeding women?
20 - Can you tell if, when someone helps with the housework and childcare, they are supporting the breastfeeding woman?	20 - Have you ever heard that doing household chores and looking after the children would help with breastfeeding?
21 - Can you tell if, when a person is willing to help in a woman's time of need, they are supporting breastfeeding?	21 - Have you ever heard that being around to help with needs is a way of supporting a breastfeeding woman?
22 - Can you tell if when a person values breastfeeding, they are supporting the woman who breastfeeds?	22 - Can you tell if by saying nice things about breastfeeding you are helping the breastfeeding woman?
23 - Can you tell if when a person teaches what they know about breastfeeding, they are supporting breastfeeding woman?	23 - Can you tell if passing on information about breastfeeding is a way of helping breastfeeding woman?
24 - Can you tell if when a person tries to answer questions and learn more about breastfeeding, they are supporting breastfeeding?	24 - Can you tell if one of the ways to support breastfeeding women is to seek more information about breastfeeding?

Continue...

Chart 1 - Continuation

Pre-test version	Post-test version
<p style="text-align: center;">Attitudes</p> <p>25 - Do you think breastfeeding is important?</p> <p>26 - Do you think it is important to say good things about breastfeeding to your daughter and/or daughter-in-law?</p> <p>27 - Do you think that a mother/mother-in-law who has breastfed sets an example for her daughter and/or daughter-in-law?</p> <p>28 - Do you think it is ugly for a mother to breastfeed in front of other people?</p> <p>29 - Do you believe that a mother should only breastfeed as long as it is comfortable for her?</p> <p>30 - Do you find it difficult to look after a child who only breastfeeds?</p> <p>31 - Do you think that breastfeeding hinders the mother's return to study/work?</p> <p>32 - Do you think the grandmother's opinion influences the mother's choice of baby food?</p>	<p style="text-align: center;">Attitudes</p> <p>25 - Do you believe in the importance of breastfeeding?</p> <p>26 - Do you think it is important for a woman to hear good opinions about breastfeeding from her mother and/or mother-in-law?</p> <p>27 - Do you think that a mother and/or mother-in-law having breastfed is important for a woman to breastfeed?</p> <p>28 - Do you think it is shameful for woman to breastfeed in public?</p> <p>29 - Do you believe that a woman's comfort with breastfeeding favors continued breastfeeding?</p> <p>30 - Do you think that the fact that a child only breastfeeds makes it difficult for you to take care of it?</p> <p>31 - Do you think that breastfeeding mothers face more difficulties when they return to work/study?</p> <p>32 - Do you believe that a woman's choice to breastfeed or not is influenced by the opinion of her mother and/or mother-in-law?</p>
<p style="text-align: center;">Practices</p> <p>33 - Have you helped other women to breastfeed?</p> <p>34 - Do you participate in your daughter's/daughter-in-law's prenatal appointments and/or home visits by health professionals?</p> <p>35 - Do you tell your daughter and/or daughter-in-law good things about breastfeeding?</p> <p>36 - Do you encourage your daughter and/or daughter-in-law to breastfeed?</p> <p>37 - Do you teach your daughter and/or daughter-in-law the things you know about breastfeeding?</p> <p>38 - Did you tell your daughter and/or daughter-in-law about your experience with breastfeeding?</p> <p>39 - Do you seek out information to learn more about breastfeeding?</p> <p>40 - Do you encourage your daughter and/or daughter-in-law to eat healthy food?</p> <p>41 - Will you stay with your daughter and/or daughter-in-law during labor until she can put the baby to the breast?</p> <p>42 - Will you be available to help your daughter and/or daughter-in-law breastfeed if she needs it?</p> <p>43 - Will you help your daughter and/or daughter-in-law with housework and childcare so that she has more time to rest and breastfeed?</p> <p>44 - Will you help look after the baby while your daughter and/or daughter-in-law is working or studying?</p> <p>45 - Will you help your daughter and/or daughter-in-law with breastfeeding difficulties?</p> <p>46 - Will you advise your daughter or daughter-in-law to give the baby water, tea and other food before the baby is six months old?</p>	<p style="text-align: center;">Practices</p> <p>33 - Have you ever helped other women in your daily life when they were breastfeeding?</p> <p>34 - Did you go to any prenatal appointments with your daughter and/or daughter-in-law or were you present at the home visit made by the health center staff?</p> <p>35 - Are you someone who says good things about breastfeeding to your daughter and/or daughter-in-law?</p> <p>36 - Do you encourage your daughter or daughter-in-law to breastfeed?</p> <p>37 - Have you tried to tell your daughter and/or daughter-in-law what you know about breastfeeding?</p> <p>38 - Have you talked about your breastfeeding experiences with your daughter and/or daughter-in-law?</p> <p>39 - Have you tried to learn more about breastfeeding?</p> <p>40 - Do you give your daughter and/or daughter-in-law advice about eating healthy food while breastfeeding?</p> <p>41 - Were you by your daughter's side during and after childbirth until she was able to breastfeed?</p> <p>42 - Are you a person that your daughter and/or daughter-in-law can count on for support while she is breastfeeding?</p> <p>43 - Are you a person who helps with household activities and with the children so that your daughter and/or daughter-in-law can rest more and have time to breastfeed?</p> <p>44 - Will you look after your grandchild when your daughter and/or daughter-in-law return to work or school?</p> <p>45 - Will you be available to help your daughter and/or daughter-in-law if she has problems breastfeeding?</p> <p>46 - Did you tell your daughter and/or daughter-in-law, before your grandchild was six months old, to give water, tea, and other food?</p>

years (SD \pm 10.1), working as teachers (68.2%), with an average length of training of 20.8 years (SD \pm 9.4).

Regarding clarity, 13 items were deemed inadequate (1, 6, 8, 10, 11, 16, 17, 18, 21, 22, 24, 29, and 41), with binomial test values lower than 0.85. Item 10 was also rated the lowest in terms of the adequacy of the vocabulary. When evaluated on the importance of the content covered, no item in the KAP was considered irrelevant ($p > 0.05$). On the questioning logic, questions 11, 24, 29, and 41 obtained agreements below 0.85.

As for the CVI, most of the items obtained an Item-Level Content Validity Index (I-CVI) between 0.85 and 1.00, except for five of them (13, 21, 24, 29, and 41). The average Scale-Level Content Validity Index, Average Calculation Method (S-CVI/AVE), of the KAP survey pre-test version was 0.94 (Table 1).

In the process of validating the KAP post-test version, 12 items received an approval of less than 0.85 in terms of clarity (7, 8, 10, 11, 16, 17, 18, 21, 23, 29, 30, and 43). In terms of the importance of the topic addressed in the question and the logic of the questioning, all the items were adequate ($p > 0.05$). In the analysis of the adequacy of the vocabulary, item 29 was the only inadequate item ($p = 0.09$).

As for the CVI, only two questions (13 and 29) had a CVI below 0.85. The average S-CVI/AVE of the KAP survey post-test version was 0.94 (Table 2).

After analyzing the comments, one question was excluded from the pre-test version and 21 were reworded in terms of content. It was decided to exclude item 11 from the pre-test ($p = 0.226$) because the content was covered in the following question, number 12 ($p = 0.863$), with a higher level of significance. In the post-test, there was no request to exclude item 11, but the decision was made to delete this item in order to maintain standardization.

As a result, the instrument now has 45 items divided into three domains: knowledge, attitudes, and practices, with 23, 8, and 14 items in each, respectively.

After the adjustments suggested by the judges, the KAP survey was applied to the grandmothers for semantic evaluation. Most of the grandmothers who participated in the evaluation were mothers of the postpartum women (80%), half were married, 40% had completed high school and only 10% had a formal job at the time of the interview, which was in the retail sector. Eight grandmothers had a family income of up to one minimum wage and lived with an average of 2.8 people in the household. As for the number of children, they all had between two and four. Only one item was not clear/understandable for more than 10% of the sample (21) in the pre-test, and two (10 and 21) in the post-test (Table 3).

and comprehension below 90.0% were reformulated. In addition to these, it was decided to modify questions 23 and 46, even with an understanding percentage of 90.0%, in order to make them clearer for the grandmothers.

The reformulation process resulted in a pre-test and post-test KAP survey format that was considered valid (Appendices I and II).

DISCUSSION

It is worth highlighting the pioneering nature of this study in the construction and evaluation of a KAP survey on breastfeeding aimed at grandmothers. This survey was structured in such a way as to subsidize the actions of professionals working with pregnant and postpartum women, with a view to also including the children's grandparents, in order to develop culturally congruent health actions. By using it, professionals can identify the weaknesses and strengths presented by the population and plan health education actions on the subject.

In this context, the KAP pre- and post-test survey is a support tool for health professionals in diagnosing, planning educational actions, and evaluating the learning of grandmothers, who are key players in the breastfeeding support network.

The survey was validated by Brazilian professionals from different regions and with different health backgrounds, which makes it interdisciplinary and culturally consistent in terms of what is considered relevant in relation to the knowledge, attitudes, and practices of the country's grandmothers toward breastfeeding. It should be noted that the use of this instrument in other countries requires translation and cultural adaptation.

The procedure for constructing and validating the survey in question followed a rigorous methodology in order to ensure the validity of its content⁽¹⁵⁾. In order to assess the effect of the educational activity, the KAP survey was structured in pre- and post-test versions to avoid memory bias. This bias occurs when subjects learn to answer a questionnaire better or worse after taking the pre-test⁽¹⁶⁾. After being constructed, the KAP was subjected to content validation to check the suitability of the questions included.

Professionals working in care and teaching professions were invited to participate in the validation process. The literature recognizes the diversity of professional experiences of judges who take part in the validation of instruments. Different knowledge is linked to different perspectives on the issue being addressed⁽¹⁷⁾.

The total S-CVI/AVE of the instrument in both versions was 0.94. Based on this value, the KAP was con-

Table 1 - Validation of the pre-test version of the KAP by health professionals, according to clarity, importance, adequacy of vocabulary, logic of items, and relevance, Recife, Pernambuco, Brazil, 2019

Item	Clarity			Importance			Adequacy of vocabulary			Logic			I-CVI
	n (%)	p*	p†	n (%)	p*	p†	n (%)	p*	p†	n (%)	p*	p†	
1	17 (77.3)	0.22	0.77	22 (100.0)	1.00	1.00	18 (81.8)	0.42	0.81	20 (90.9)	0.86	0.90	1.00
2	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	1.00
3	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	20 (90.9)	0.86	0.90	21 (95.5)	0.97	0.95	0.95
4	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	22 (100)	1.00	1.00	0.95
5	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	19 (86.4)	0.66	0.86	20 (90.9)	0.86	0.90	1.00
6	17 (77.3)	0.22	0.77	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	0.90
7	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100)	1.00	1.00	22 (100.0)	1.00	1.00	1.00
8	17 (77.3)	0.22	0.77	22 (100.0)	1.00	1.00	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	1.00
9	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	1.00
10	14 (63.6)	0.01	0.63	21 (95.5)	0.97	0.95	16 (72.7)	0.09	0.72	20 (90.9)	0.86	0.90	0.95
11	17 (77.3)	0.22	0.77	21 (95.5)	0.97	0.95	20 (90.9)	0.86	0.90	18 (81.8)	0.42	0.81	0.95
12	21 (95.5)	0.97	0.95	22 (100)	1.00	1.00	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	1.00
13	20 (90.9)	0.86	0.90	19 (86.4)	0.66	0.86	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	0.81
14	20 (90.9)	0.86	0.90	22 (100)	1.00	1.00	22 (100)	1.00	1.00	22 (100.0)	1.00	1.00	0.95
15	20 (90.9)	0.86	0.90	22 (100)	1.00	1.00	22 (100)	1.00	1.00	22 (100.0)	1.00	1.00	1.00
16	16 (72.7)	0.09	0.72	22 (100)	1.00	1.00	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	1.00
17	17 (77.3)	0.22	0.77	22 (100)	1.00	1.00	21 (95.5)	0.97	0.95	19 (86.4)	0.66	0.86	1.00
18	16 (72.7)	0.09	0.72	21 (95.5)	0.97	0.95	19 (86.4)	0.66	0.86	20 (90.9)	0.86	0.90	0.91
19	19 (86.4)	0.66	0.86	22 (100)	1.00	1.00	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	1.00
20	20 (90.9)	0.86	0.90	22 (100)	1.00	1.00	21 (95.5)	0.97	0.95	20 (90.9)	0.86	0.90	1.00
21	16 (72.7)	0.09	0.72	22 (100)	1.00	1.00	20 (90.9)	0.86	0.90	20 (90.9)	0.86	0.90	0.81
22	17 (77.3)	0.22	0.77	22 (100)	1.00	1.00	21 (95.5)	0.97	0.95	22 (100)	1.00	1.00	0.86
23	19 (86.4)	0.66	0.86	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	20 (90.9)	0.86	0.90	0.86
24	16 (72.7)	0.09	0.72	19 (86.4)	0.66	0.86	22 (100.0)	1.00	1.00	18 (81.8)	0.42	0.81	0.77
25	21 (95.5)	0.97	0.95	22 (100)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	1.00
26	22 (100)	1.00	1.00	22 (100)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	1.00
27	21 (95.5)	0.97	0.95	22 (100)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.95
28	21 (95.5)	0.97	0.95	22 (100)	1.00	1.00	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	0.95
29	14 (63.6)	0.01	0.63	20 (90.9)	0.86	0.90	18 (81.8)	0.42	0.81	17 (77.3)	0.22	0.77	0.81
30	21 (95.5)	0.97	0.95	22 (100)	1.00	1.00	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	0.95
31	21 (95.5)	0.97	0.95	22 (100)	1.00	1.00	22 (100)	1.00	1.00	22 (100.0)	1.00	1.00	0.95
32	21 (95.5)	0.97	0.95	22 (100)	1.00	1.00	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	0.95
33	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.95
34	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	1.00
35	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	1.00
36	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	1.00
37	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.95
38	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.95
39	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	0.91
40	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	0.86
41	18 (81.8)	0.42	0.81	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	18 (81.8)	0.42	0.81	0.77
42	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.95
43	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	20 (90.9)	0.86	0.90	0.90
44	20 (90.9)	0.86	0.90	20 (90.9)	0.86	0.90	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	0.90
45	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	22 (100)	1.00	1.00	19 (86.4)	0.66	0.86	0.95
46	19 (86.4)	0.66	0.86	21 (95.5)	0.97	0.95	20 (90.9)	0.86	0.90	20 (90.9)	0.86	0.90	0.86

Note: Items 1 to 24 refer to the Knowledge domain; items 25 to 32 refer to Attitudes, and items 33 to 46 to Practices; *p-value; †binomial test; I-CVI: Item-Level Content Validity Index; Scale-Level Content Validity Index (S-CVI/AVE): 0.94.

Table 2 - Validation of the post-test version of the KAP by health professionals, according to clarity, importance, relevance, adequacy of vocabulary, logic of items, and relevance, Recife, Pernambuco, Brazil, 2019

Item	Clarity			Importance			Adequacy of vocabulary			Logic			I-CVI
	n (%)	p*	p [†]	n (%)	p*	p [†]	n (%)	p*	p [†]	n (%)	p*	p [†]	
1	19 (86.4)	0.66	0.86	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	20 (90.9)	0.86	0.90	1.00
2	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	1.00
3	19 (86.4)	0.66	0.86	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	1.00
4	19 (86.4)	0.66	0.86	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	20 (90.9)	0.86	0.90	1.00
5	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	1.00
6	20 (90.9)	0.86	0.90	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	0.95
7	17 (77.3)	0.22	0.77	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	1.00
8	17 (77.3)	0.22	0.77	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	19 (86.4)	0.66	0.86	0.95
9	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	1.00
10	18 (81.8)	0.42	0.81	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	20 (90.9)	0.86	0.90	0.86
11	17 (77.3)	0.22	0.77	20 (90.9)	0.86	0.90	20 (90.9)	0.86	0.90	19 (86.4)	0.66	0.86	0.90
12	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	20 (90.9)	0.86	0.90	1.00
13	19 (86.4)	0.66	0.86	20 (90.9)	0.86	0.90	20 (90.9)	0.86	0.90	20 (90.9)	0.86	0.90	0.81
14	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.95
15	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	1.00
16	18 (81.8)	0.42	0.81	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	19 (86.4)	0.66	0.86	1.00
17	17 (77.3)	0.22	0.77	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	19 (86.4)	0.66	0.86	1.00
18	18 (81.8)	0.42	0.81	20 (90.9)	0.86	0.90	20 (90.9)	0.86	0.90	20 (90.9)	0.86	0.90	0.90
19	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	1.00
20	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	20 (90.9)	0.86	0.90	1.00
21	18 (81.8)	0.42	0.81	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.95
22	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	0.95
23	18 (81.8)	0.42	0.81	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	0.90
24	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.90
25	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	1.00
26	20 (90.9)	0.86	0.90	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	0.90
27	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	0.86
28	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	0.90
29	17 (77.3)	0.22	0.77	21 (95.5)	0.97	0.95	16 (72.7)	0.09	0.72	21 (95.5)	0.97	0.95	0.77
30	16 (72.7)	0.09	0.72	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	0.91
31	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.91
32	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.86
33	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	0.86
34	20 (90.9)	0.86	0.90	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	0.86
35	22 (100)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.95
36	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	1.00
37	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	1.00
38	21 (95.5)	0.97	0.95	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	0.95
39	22 (100)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.95
40	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.91
41	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.86
42	19 (86.4)	0.66	0.86	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	0.95
43	17 (77.3)	0.22	0.77	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	20 (90.9)	0.86	0.90	0.90
44	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	22 (100.0)	1.00	1.00	0.90
45	20 (90.9)	0.86	0.90	22 (100.0)	1.00	1.00	21 (95.5)	0.97	0.95	22 (100.0)	1.00	1.00	0.90
46	20 (90.9)	0.86	0.90	21 (95.5)	0.97	0.95	20 (90.9)	0.86	0.90	21 (95.5)	0.97	0.95	0.90

Note: Items 1 to 24 refer to the Knowledge domain; items 25 to 32 refer to Attitudes, and items 33 to 46 to Practices; *p-value; [†]binomial test; I-CVI: Item-Level Content Validity Index; Scale-Level Content Validity Index (S-CVI/AVE): 0.94.

Table 3 - Semantic evaluation of the KAP, pre- and post-test versions, regarding the clarity and comprehension of items by grandmothers, Recife, Pernambuco, Brazil, 2019

Items	Clarity and comprehension			
	Pre-test		Post-test	
	Yes n (%)	No n (%)	Yes n (%)	No n (%)
1	9 (90.0)	1 (10.0)	9 (90.0)	1 (10.0)
2	10 (100.0)	0	10 (100.0)	0
3	10 (100.0)	0	10 (100.0)	0
4	10 (100.0)	0	10 (100.0)	0
5	9 (90.0)	1 (10.0)	10 (100.0)	0
6	10 (100.0)	0	10 (100.0)	0
7	10 (100.0)	0	10 (100.0)	0
8	10 (100.0)	0	10 (100.0)	0
9	10 (100.0)	0	10 (100.0)	0
10	9 (90.0)	1 (10.0)	8 (80.0)	2 (20.0)
11	-	-	-	-
12	10 (100.0)	0	10 (100.0)	0
13	10 (100.0)	0	10 (100.0)	0
14	10 (100.0)	0	10 (100.0)	0
15	10 (100.0)	0	10 (100.0)	0
16	10 (100.0)	0	10 (100.0)	0
17	10 (100.0)	0	10 (100.0)	0
18	10 (100.0)	0	10 (100.0)	0
19	10 (100.0)	0	10 (100.0)	0
20	10 (100.0)	0	10 (100.0)	0
21	6 (60%)	4 (40.0)	8 (80.0)	2 (20%)
22	10 (100.0)	0	10 (100.0)	0
23	9 (90%)	1 (10.0)	9 (90.0)	1 (10%)
24	10 (100.0)	0	10 (100.0)	0
25	10 (100.0)	0	10 (100.0)	0
26	10 (100.0)	0	10 (100.0)	0
27	10 (100.0)	0	10 (100.0)	0
28	10 (100.0)	0	10 (100.0)	0
29	10 (100%)	0	10 (100.0)	0
30	10 (100.0)	0	10 (100.0)	0
31	10 (100%)	0	10 (100.0)	0
32	10 (100.0)	0	10 (100.0)	0
33	10 (100.0)	0	10 (100.0)	0
34	10 (100.0)	0	10 (100.0)	0
35	10 (100.0)	0	10 (100.0)	0
36	10 (100.0)	0	10 (100.0)	0
37	10 (100.0)	0	10 (100.0)	0
38	10 (100.0)	0	10 (100.0)	0
39	10 (100.0)	0	10 (100.0)	0
40	10 (100.0)	0	10 (100.0)	0
41	10 (100.0)	0	10 (100.0)	0
42	10 (100.0)	0	10 (100.0)	0
43	10 (100.0)	0	10 (100.0)	0
44	10 (100.0)	0	10 (100.0)	0
45	10 (100.0)	0	10 (100.0)	0
46	9 (90.0)	1 (10.0)	9 (90.0)	1 (10.0)

Note: Items 1 to 24 refer to the Knowledge domain; items 25 to 32 refer to Attitudes, and items 33 to 46 to Practices.

sidered adequate in terms of content and intended use. In the process of evaluating an instrument, CVI values above 0.9 are considered excellent⁽⁹⁾. After content validation, the instrument ended up having 45 items divided into three domains: 23 questions on knowledge, 8 on attitudes, and 14 on practices.

When validating the pre-test version of the KAP survey, 13 items were evaluated as insufficient in terms of one of the aspects investigated - clarity, importance, adequacy of the vocabulary, or logic of the questioning. Of these, 11 items were reformulated and one was deleted in line with the suggestions made. As for item 6, the researchers judged that the suggestions would not make the question any clearer, so they decided not to change it. In addition to the 11 items mentioned above, seven others, although adequate ($p > 0.85$), received suggestions and were modified.

The questions relating to the knowledge domain, which were then written as "can you tell" instead of "have you ever heard of it" are not counted as adjustments. In the opinion of the judges who validated the instrument, the fact that an individual has heard of something does not necessarily generate knowledge. On the other hand, the expression "can you tell" would be linked to an understanding of the fact being discussed.

Still in relation to the pre-test, the content validity index was above 0.85 for 41 items, except for 5 of them, with emphasis on item 13, which addresses the use of tea by babies. According to the judges, there is no unanimity in the scientific literature as to the minimum age at which a child should be given tea. The decision was made to keep the item because of its relevance and the frequency with which grandmothers advise its use in the Brazilian culture. For the purposes of the KAP, the current recommendation of the Ministry of Health on giving tea after the child's first year of life was used as a parameter⁽¹⁸⁾.

The items with the lowest CVI were numbers 24 and 41. According to the literature on the support practices offered by the mother's social network, there are five possible types of support. In addition to the two mentioned above, there is informational, instrumental, and emotional support⁽¹⁹⁾.

For the post-test, the relevance and logic of the items were above 0.85 for all items. Question 29 was deemed inadequate in terms of vocabulary. The clarity of twelve items was below 0.85, of which ten were reworded and one item excluded. Another nine items with a $p > 0.85$ were modified according to the suggestions made, in order to favor understanding by the target audience.

For item 17, which refers to conduct in the case of cracked nipples, there was no suggestion to change the

wording, but there was a suggestion to change the possible answers. The experts suggested including an alternative about correcting the positioning of the child in relation to the mother's body and the grip, for the treatment of fissures. This recommendation is supported by documents issued by the Ministry of Health⁽¹⁸⁾.

In the semantic evaluation stage, which aimed to subject the content of the KAP survey to analysis by the target audience to check for clarity and comprehension, four items (10, 21, 23, and 46) were not comprehensible to all the grandmothers and were reformulated. After adjusting the items, there was no new evaluation by the grandmothers, which was a limitation of the study.

Given the importance of measuring the knowledge, attitudes, and practices of grandmothers in supporting breastfeeding to substantiate the planning of health education actions, further research using the versions provided here is recommended, so that the necessary technologies can be made available to the care process and prevent early weaning.

CONCLUSION

The KAP pre- and post-test survey was considered valid in terms of content and semantic understanding for assessing grandmothers' knowledge, attitudes, and practices about breastfeeding.

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CONFLICTS OF INTEREST

None.

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AUTHORS' CONTRIBUTIONS - CRediT

BHBA: conceptualization; data curation; investigation; methodology; project administration; visualization; writing – original draft.

LPL: conceptualization; data curation; methodology; project administration; supervision; validation; visualization; writing – review & editing.

APEL: validation; writing – review & editing.

TGG: validation; writing – review & editing.

ACTL: validation; writing – review & editing.

CMP: conceptualization; data curation; methodology; project administration; supervision; validation; visualization; writing – review & editing.

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Appendix 1 - KAP (Knowledge, Attitudes, and Practices) survey of grandmothers on breastfeeding - pre-test version

PRE-TEST
<p>KNOWLEDGE</p> <p>1. Do you know who benefits when the mother breastfeeds? <input type="checkbox"/> child <input type="checkbox"/> child, mother, family, society and the environment <input type="checkbox"/> child and mother <input type="checkbox"/> child, mother, and family</p> <p>2. Do you know if children who breastfeed get sick less often? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>3. Can you tell if breastfeeding protects the mother's health? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>4. In your opinion, does breastfeeding increase the bond between mother and child? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>5. Can you tell if the milk that comes out of the mother's breast on the first days, which is called colostrum, is good for the child's health? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>6. Can you tell if breastfeeding woman needs a different diet from woman who is not breastfeeding? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>7. Do you know if there is some kind of food that increases the amount of milk? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>8. Can you tell if the mother's breast produces as much milk as the child needs? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>9. In your opinion, do breastfeeding women need to drink more water a day? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>10. Do you know if there is a type of nipple (breast beak) that makes easier the breastfeeding? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>11. Do you know until what age a baby should only breastfeed without being given water, teas, or other foods? <input type="checkbox"/> More than 6 months <input type="checkbox"/> 1 month <input type="checkbox"/> 2 months <input type="checkbox"/> 5 months <input type="checkbox"/> 3 months <input type="checkbox"/> 4 months <input type="checkbox"/> 6 months <input type="checkbox"/> I don't know</p> <p>12. Do you know from what age a child can drink tea? <input type="checkbox"/> after six months <input type="checkbox"/> only after 1 year <input type="checkbox"/> before six months <input type="checkbox"/> I don't know</p> <p>13. In your opinion, can pacifiers hinder breastfeeding? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>14. In your opinion, can bottles hinder breastfeeding? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>15. Do you know what to do when the woman's breast is engorged? <input type="checkbox"/> wait for it to heal on its own; <input type="checkbox"/> apply ointment; <input type="checkbox"/> passing virgin comb; <input type="checkbox"/> massage and milking, if it does not help, seek care from a health professional; <input type="checkbox"/> I don't know; <input type="checkbox"/> other: _____.</p> <p>16-.Do you know what to do when the breast beak (nipple) is sore/cracked? <input type="checkbox"/> applying breast milk; <input type="checkbox"/> applying fruit peel; <input type="checkbox"/> applying ointment; <input type="checkbox"/> applying a hot compress; <input type="checkbox"/> applying a cold compress; <input type="checkbox"/> adjusting the way the child is feeding at the breast and if it does not help, to seek a health professional; <input type="checkbox"/> I don't know.</p> <p>17. Do you know how breastfeeding woman can take care of her breasts? <input type="checkbox"/> washing the breasts before feeding the baby; <input type="checkbox"/> cleaning the breasts with alcohol; <input type="checkbox"/> washing the breasts normally during the shower; <input type="checkbox"/> I don't know.</p> <p>18. Can you name the people who can help a woman who is breastfeeding? <input type="checkbox"/> the woman herself; <input type="checkbox"/> only their partners; <input type="checkbox"/> only grandmothers; <input type="checkbox"/> only health professionals; <input type="checkbox"/> woman, partner, grandmothers, family, friends, neighbors, and health professionals; <input type="checkbox"/> I don't know.</p> <p>19. Can you tell if, when someone helps with the housework and childcare, they are supporting the woman to breastfeed? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>20. In your opinion, when a person is willing to help in a woman's time of needs, are they supporting breastfeeding? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>21. Can you tell if when a person says good things about breastfeeding, they are supporting the woman who breastfeeds? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>

Continue...

Appendix 1 - Continuation

PRE-TEST
22. In your opinion, when a person talks about breastfeeding, are they supporting breastfeeding? () Yes () No
23. In your opinion, when a person tries to learn more about breastfeeding, are they supporting breastfeeding? () Yes () No
ATTITUDES
24. Do you think breastfeeding is important? () Yes () No
25. Do you think it is important to say good things about breastfeeding to your daughter and/or daughter-in-law? () Yes () No
26. Do you think that a mother/mother-in-law who has breastfed sets an example for her daughter and/or daughter-in-law? () Yes () No
27. Do you think it is shameful for a mother to breastfeed in front of other people? () Yes () No
28. Do you believe that a mother should only breastfeed as long as it is good for her? () Yes () No
29. Do you find it more difficult to look after a child who only breastfeeds? () Yes () No
30. Do you think that breastfeeding hinders the mother's return to study/work? () Yes () No
31. Do you think the grandmother's opinion influences the mother's choice of breastfeeding or not her baby? () Yes () No
PRACTICES
32. Have you ever helped other women to breastfeed? () Yes () No
33. Do you participate in your daughter's/daughter-in-law's prenatal appointments and/or home visits carried out by health professionals? () Yes () No
34. Do you tell your daughter and/or daughter-in-law good things about breastfeeding? () Yes () No
35. Do you encourage your daughter and/or daughter-in-law to breastfeed? () Yes () No
36. Do you teach your daughter and/or daughter-in-law the things you know about breastfeeding? () Yes () No
37. Did you tell your daughter and/or daughter-in-law about your experience with breastfeeding? () Yes () No
38. Do you seek out information to learn more about breastfeeding? () Yes () No
39. Do you encourage your daughter and/or daughter-in-law to eat healthy food? () Yes () No
40. Will you stay with your daughter and/or daughter-in-law during or after labor, until she can put the baby to the breast? () Yes () No
41. Will you be available to help your daughter and/or daughter-in-law breastfeed if she needs it? () Yes () No
42. Will you help your daughter and/or daughter-in-law with housework and childcare so that she has more time to rest and breastfeed? () Yes () No
43. Will you help your daughter and/or daughter-in-law with breastfeeding difficulties? () Yes () No
44. Will you help look after the baby while your daughter and/or daughter-in-law is working or studying? () Yes () No
45. Will you advise your daughter or daughter-in-law to give the baby water, tea, and other food while the baby is only breastfeeding? () Yes () No

Appendix 2 - KAP (Knowledge, Attitudes, and Practices) survey of grandmothers on breastfeeding - post-test version

POST-TEST

KNOWLEDGE

1. Can you tell who benefits from breastfeeding?
 child
 child, mother, family, society, and the environment
 child and mother
 child, mother, and family
2. Can you tell if breastfeeding protects the child against diseases?
 Yes No
3. In your opinion, when a mother breastfeeds, she is protecting her health?
 Yes No
4. Can you tell if one of the advantages of breastfeeding is bringing mother and baby closer?
 Yes No
5. Can you tell if, by receiving the first milk that comes out of the mother's breast, colostrum, the child is being protected against diseases?
 Yes No
6. Can you tell if it is necessary to change the diet when a woman is breastfeeding?
 Yes No
7. Can you tell if the increase in the amount of milk depends on any food?
 Yes No
8. In your opinion, does the mother produce the amount of breast milk the child needs?
 Yes No
9. Can you tell if it is necessary to drink more water when a woman is breastfeeding?
 Yes No
10. Can you tell if breastfeeding depends on the woman's type of breast beak (nipple) to be successful?
 Yes No
11. Can you tell until what age a child should be fed only its mother's milk?
 More than 6 months
 1 month 2 months 5 months 3 months 4 months
 6 months I don't know
12. Can you tell at what age a child should be given tea?
 after six months
 only after one year
 before six months
 I don't know
13. Can you tell if a pacifier can confuse a child and make them not want to breastfeed anymore?
 Yes No
14. Can you tell if a child who uses a bottle may no longer want to breastfeed?
 Yes No
15. Can you tell what a woman should do if her breast is engorged?
 wait for it to heal on its own
 apply ointment
 comb the breast
 massage and milking, if it does not help, seek care from a health professional
 I don't know
 other:

Continue...

Appendix 2 - Continuation**POST-TEST**

16. Can you tell what can be done to treat a cracked breast beak?
 applying breast milk on
 put fruit peel on
 applying ointment on
 make a hot compress
 make a cold compress
 adjust the way the child is feeding at the breast and if it does not help, to seek a health professional
 I don't know
17. Do you know the care women should take with their breasts while breastfeeding?
 washing the breasts before feeding the baby
 cleaning the breasts with alcohol
 washing the breasts normally during the shower
 I don't know
18. Can you name the people who can support a woman who is breastfeeding?
 the woman herself
 only their partners
 only grandmothers
 only health professionals
 woman, partner, grandmothers, family, friends, neighbors, and health professionals
 I don't know
19. In your opinion, is doing household chores and looking after the children a way to help with breastfeeding?
 Yes No
20. In your opinion, if a person tells a woman that he/she can help her when she needs it, is he/she supporting breastfeeding?
 Yes No
21. Can you tell if when a person says nice things about breastfeeding her/she is helping breastfeeding women?
 Yes No
22. Can you tell if talking about breastfeeding is a way of helping breastfeeding women?
 Yes No
23. Can you tell if one of the ways to support breastfeeding women is to seek more information about breastfeeding?
 Yes No

ATTITUDES

24. Do you believe in the importance of breastfeeding?
 Yes No
25. Do you think it is important for a woman to hear good opinions about breastfeeding from her mother and/or mother-in-law?
 Yes No
26. Do you think that the example of a mother and/or mother-in-law who has breastfed is important for a woman to breastfeed?
 Yes No
27. Do you think it is shameful for women to breastfeed in public?
 Yes No
28. Do you believe that a woman's comfort with breastfeeding favors continued breastfeeding?
 Yes No
29. Do you find it more tiring to look after a child who only breastfeeds?
 Yes No
30. Do you think it is more difficult for a breastfeeding mother to return to work/study?
 Yes No
31. Do you believe that a woman's choice to breastfeed or not is influenced by the opinion of her mother and/or mother-in-law?
 Yes No

Continue...

Appendix 2 - Continuation

POST-TEST

PRACTICES

32. Have you ever helped other women in your daily life when they were breastfeeding?
() Yes () No
33. Did you go to any prenatal appointments with your daughter and/or daughter-in-law or were you present at the home visit made by the health center staff?
() Yes () No
34. Are you someone who says good things about breastfeeding to your daughter and/or daughter-in-law?
() Yes () No
35. Do you encourage your daughter or daughter-in-law to breastfeed?
() Yes () No
36. Have you told your daughter and/or daughter-in-law what you know about breastfeeding?
() Yes () No
37. Have you talked about your breastfeeding experiences with your daughter and/or daughter-in-law?
() Yes () No
38. Do you try to learn more about breastfeeding?
() Yes () No
39. Do you give your daughter and/or daughter-in-law advice about eating healthy food while breastfeeding?
() Yes () No
40. Were you by your daughter's e/or daughter-in-law side during and after childbirth until your grandchild to be able to breastfeed?
() Yes () No
41. Are you a person that your daughter and/or daughter-in-law can count on for support while she is breastfeeding?
() Yes () No
42. Are you a person who helps with household activities and with the children so that your daughter and/or daughter-in-law can rest more and have time to breastfeed?
() Yes () No
43. Will you be available to help your daughter and/or daughter-in-law if she has problems breastfeeding?
() Yes () No
44. Will you look after your grandchild when your daughter and/or daughter-in-law returns to work or school?
() Yes () No
45. Did you tell your daughter and/or daughter-in-law to give water, tea, or other foods to your grandchild who only breastfeeding?
() Yes () No