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Development and Assessment of a Questionnaire to Study Protection, Promotion, and Support of Breastfeeding

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ABSTRACT

Objective: To develop an instrument to measure variables that influence health care professionals' behavior with regard to the protection, promotion, and support of breastfeeding, especially one that related to the Baby-Friendly Hospital Initiative (BFHI), and to conduct a psychometric assessment.

Design: Cross-sectional study.

Setting: Two public health departments in eastern Spain.

Participants: A convenience sample of 201 maternity and primary care professionals.

Methods: The Questionnaire of Professional Breastfeeding Support of the Healthcare Quality Management Program of the Spanish Region of Murcia (QPBS-EMCA) was developed using the theory of reasoned action as a conceptual framework and the Global Criteria for evaluating implementation of the BFHI. It comprises 4 scales on beliefs, attitudes, subjective norms, and behavioral intention. The development process included item assessment and selection based on expert judgment and statistical criteria. The QPBS-EMCA scales were assessed for reliability and validity, including internal consistency, principal components factor analysis, criterion-related validity, and comparison of contrasted groups.

Results: The Beliefs, Attitudes, and Subjective Norms Scales were multidimensional, whereas the Behavioral Intention Scale was unidimensional. Cronbach's alpha coefficients ranged from .65 to .81. Total scores for the Beliefs, Attitudes, and Subjective Norms Scales predicted scores for the Behavioral Intention Scale. Scores for the different QPBS-EMCA scales were related to professionals' previous breastfeeding training, interest in new training, and appraisal of breastfeeding policy in the workplace.

Conclusion: The psychometric characteristics of the QPBS-EMCA render it suitable for evaluation of professionals' beliefs, attitudes, subjective norms, and behavioral intention in relation to breastfeeding and could be useful in health care facilities implementing quality improvement processes based on the BFHI.

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B reastfeeding is believed to provide the best nutrition during the first years of life because of its substantial short- and long-term health benefits for mothers, infants, and young children (Johnston, Landers, Noble, Szucs, & Viehmann, 2012). The World Health Organization recommended exclusive breastfeeding for the first 6 months and breastfeeding with complementary foods up to at least 2 years of age (Saadeh, 2003). In Spain, as in most European countries (Cattaneo et al., 2010), breastfeeding rates are far below these recommendations, and only 46.9% of Spanish children receive breast milk at the age of 6 months (Spanish Ministry of Health and Social Policies, 2013). Consequently, the protection, promotion, and support of breastfeeding are regarded as public health priorities in Europe, and in Spain the National Health System Quality Plan urges the use of efficient breastfeeding support practices (Spanish Ministry of Health and Social Policies, 2009).

Early breastfeeding cessation is usually the result of a combination of various factors at individual, group, and societal levels (Oliver-Roig, 2013). However, the

health system is one of the factors that most negatively affects low breastfeeding rates because of the influence that professional interventions during the first days of life have on the establishment of breastfeeding. Practices such as the separation of mothers and infants after birth, the recommendation of restricted breastfeeding, the use of pacifiers before breastfeeding is well established, giving water or formula supplements without medical indication, inappropriate recommendations for discontinuing breastfeeding, the distribution of free formula samples, professionals' lack of clinical training and skills for managing breastfeeding problems, and inconsistent or inadequate information on breastfeeding are negatively related to breastfeeding duration (Benoit & Semenic, 2014; DiGirolamo, Grummer-Strawn, & Fein, 2008; Oliver-Roig, 2013).

To improve hospital practices, researchers demonstrated that implementation of the Baby-Friendly Hospital Initiative (BFHI) is one of the most effective interventions to affect subsequent overall improvement in breastfeeding rates (García-de-León-González et al., 2010; Lillehoj & Dobson, 2012; Patel et al., 2014). The BFHI defined the quality standards that are meant to replace health facility practices that hinder the establishment and continuation of breastfeeding. The accreditation criteria of the BFHI include development of a written breastfeeding policy, education for all health care staff in the skills necessary to implement this policy, information for all pregnant women about the benefits and management of breastfeeding, implementation of evidence-based practices proven to increase breastfeeding, avoidance of health facility–based marketing of infant formula, and encouragement for the establishment of breastfeeding support groups (World Health Organization & United Nations International Children's Emergency Fund, 2009).

Industrialized countries have few accredited baby-friendly hospitals compared with the rest of the world (Semenic et al., 2012); in Spain, only 16 hospitals, which attend less than 5% of Spanish births, have BFHI accreditation (Spanish BFHI Association, 2015). This illustrates the gap between evidence-based care recommendations and current care practices. The study of contextual features that act as barriers or facilitators to the adoption of evidence-based practices in health care is a key priority in the field of implementation science (Eccles et al., 2009).

> **Health care providers' beliefs and attitudes concerning breastfeeding and the Baby-Friendly Hospital Initiative are the most frequently mentioned obstacles when an implementation process is described.**

Several types of obstacles to BFHI implementation have been identified (Semenic et al., 2012). *Sociopolitical obstacles* include aspects related to the broader contexts such the aggressive marketing practices of infant formula companies, lax government adherence to *The International Code of Marketing of Breast Milk Substitutes* (the *Code*; World Health Organization, 1981), and sociocultural infant feeding norms that favor formula feeding. *Organizational obstacles* refer to the structures and processes within health care facilities. These include barriers such as insufficient funding, difficulties of the staff to provide breastfeeding support or attend training sessions, and hospital routines that interfere with breastfeeding. Finally, *individual obstacles* pertain to the knowledge, attitudes, and practices of health care workers or health care users related to breastfeeding.

Health care professionals play critical roles in quality improvement interventions based on the BFHI because substantial changes in patterns of care are involved (Schmied et al., 2014; Taylor, Gribble, Sheehan, Schmied, & Dykes, 2010; Weddig, Baker, & Auld, 2011). A low level of knowledge and neutral or negative attitudes about breastfeeding or the BFHI, reluctance to promote breastfeeding out of concern about making mothers feel guilty, overuse of infant formula, and adherence to outdated practices to support breastfeeding have been identified as barriers to implementation of the BFHI at the individual level of health care providers (Bartick, Stuebe, Shealy, Walker, & Grummer-Strawn, 2009; Benoit & Semenic, 2014; Semenic et al., 2012).

Existent BFHI assessment tools (World Health Organization & United Nations International Children's Emergency Fund, 2009) and indicators proposed to assess the quality gaps in breastfeeding care (Bartick et al., 2009; de Bruin-Kooistra, Amelink-Verburg, Buitendijk, & Westert, 2012; Groene, Klazinga, Kazandjian, Lombrail, & Bartels, 2008) are useful to determine the degree of implementation of quality standards in a health facility, but they provide little information on staff adherence to the change process.

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In addition, although previous researchers have developed attitude measurements to assess professionals' support of breastfeeding with or without other variables related to professional behavior, none of them provides sufficient evidences of content and construct validity, together with appropriate reliability data, and none can be applied to all health professionals linked to breastfeeding attention (Table e1, which provides a description of the existing questionnaires used to measure the attitudes of professionals about the support of breastfeeding, is provided as a supplemental file to the online version of this article). For example, defining the construct for assessment is essential to develop representative items (Terwee et al., 2007). Only three tools on professionals' attitudes toward breastfeeding have adequately defined frameworks on which they were based (Bernaix, 2000; Dodgson & Tarrant, 2007; Kang, Song, & Im, 2005). Furthermore, only two of these research groups (Bernaix, 2000; Kang et al., 2005) assessed the degree to which the items were representative of the attitudes of the professionals, through the use of expert judgment during the selection process of the items, as is recommended (Terwee et al., 2007). However, the substantive or statistical features that were used as the basis to select items from the initial version of the tools and data on their factor structure were not available, which limited the quality of the content evidences and did not allow for proper interpretation of the reliability results. Finally, other tools on attitudes of health professionals toward breastfeeding do not have sufficient evidence on content validity or construct validity characteristics (Brodribb, Fallon, Jackson, & Hegney, 2008; Dodgson & Tarrant, 2007; Martens, 2000) or reliability (Ekström, Matthiesen, Widström, & Nissen, 2005; Siddell, Marinelli, Froman, & Burke, 2003) and were not developed to target different health professionals.

The development of valid and reliable tools to assess barriers to the provision of adequate protection, promotion, and support of breastfeeding, and specifically to the implementation of the BFHI, that are encountered by health care providers in hospital or community settings could contribute to the design and assessment of targeted interventions in a quality improvement process. Our project, promoted by the Healthcare Quality Management Program of the Spanish Region of Murcia (EMCA Program), was therefore initiated to develop and validate a questionnaire to measure the variables that influence the behavior of health care professionals in terms of the protection, promotion, and support of breastfeeding. In this article we describe the development and psychometric properties of this questionnaire.

Methods

Theoretical Framework

Supportive behavior of staff related to the BFHI can be explained using the theory of reasoned action (TRA; Ajzen & Fishbein, 1980). According to the TRA, the most important determinant of behavior is behavioral intention. Factors that affect intentions include beliefs about the implications of an action, attitudes toward behavior, and subjective norms or perception of others' attitudes toward behavior (Ajzen & Fishbein, 1980).

Development of the Questionnaire

The Questionnaire on Professional Breastfeeding Support of the EMCA Program (QPBS-EMCA) comprises four scales that were generated to evaluate beliefs, attitudes, subjective norms, and behavioral intention. Questionnaire items were generated for each scale by a multidisciplinary working group composed of two preventive medicine and public health care physicians, a pediatrician, a midwife, a nurse, and two psychologists, all of whom had previous experience in breastfeeding support and research and collaborated with the program for the Protection, Promotion, and Support of Breastfeeding in the Region of Murcia.

With the theoretical framework established, the content of the QPBS-EMCA was based on the Global Criteria to evaluate the implementation of the BFHI (World Health Organization & United Nations International Children's Emergency Fund, 2009), information on quality improvement interventions to achieve BFHI compliance in Spain (García-de-León-González et al., 2010), and the Code (World Health Organization, 1981). Additionally, relevant aspects identified in previous studies on professional support for breastfeeding, such as continuity of care, conflicting advice, and practical help offered (McInnes & Chambers, 2008), were taken into account in the development of the items.

For item construction, the working group classified these items into four content domains (Figure 1): breastfeeding practice, information on breastfeeding and professionals' support style,
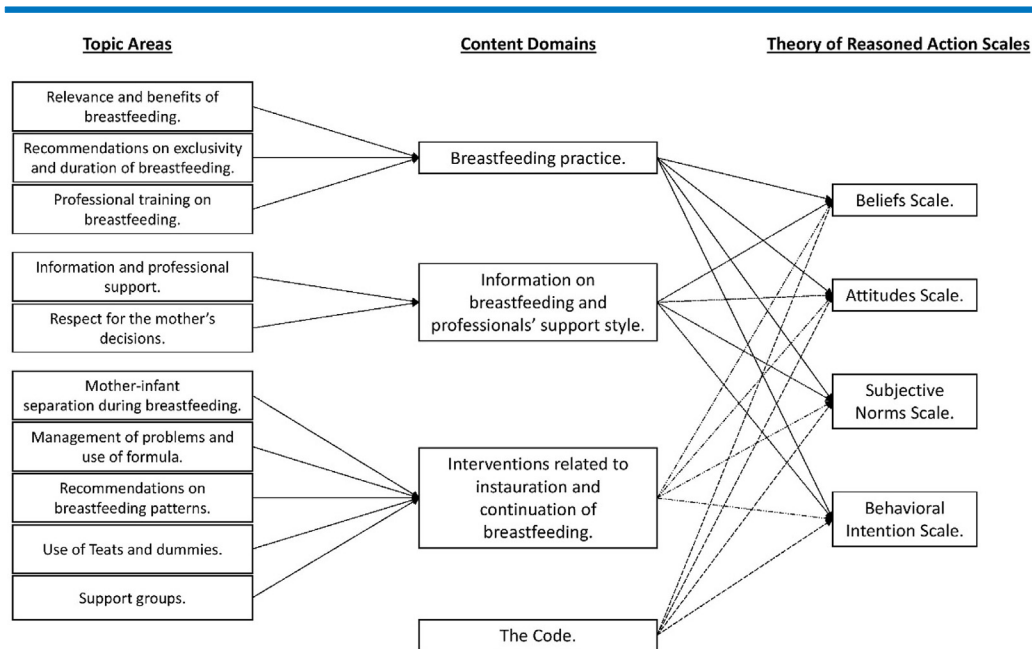
Figure 1. Theoretical framework, content domains, and topic areas considered for item construction of the four scales of the Questionnaire of Professional Breastfeeding Support of the Healthcare Quality Management Program of Murcia.

interventions related to instauration and continuation of breastfeeding, and the *Code*. The first domain, breastfeeding practice, included items related to three topic areas: relevance and benefits of breastfeeding, recommendations on exclusivity and duration, and professional training. The second domain, information on breastfeeding and professionals' support style, included items related to information and professional support, as well as respect for the mother's decisions. The instauration and continuation of breastfeeding domain included items on five topic areas: early mother–newborn skin-to-skin contact and separation during breastfeeding, problems with management and the use of formula supplements, recommendations on breastfeeding patterns, use of teats and dummies, and support groups. Items on meeting *Code* recommendations were included in the last domain. Because the tool was addressed not to the management team but to health care providers, we excluded those topic areas related to health facilities management, such as the existence of a written breastfeeding policy or the provision of resources. In developing the items, at least one item in each of the topic areas for each of the four scales of the QPBS-EMCA was generated. Initially, a total of 139 items were formulated for the four scales that comprised the

instrument. Replies were scored on a Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

These items were sent to two expert groups via e-mail for review. One group included 20 clinical professionals, each with more than 5 years of experience in perinatal care and who had participated in the program for the Protection, Promotion, and Support of Breastfeeding in the Region of Murcia. All were Spanish researchers working in the field of breastfeeding or people who had participated as teachers in training programs on breastfeeding in Spain. The second group included eight psychologists with expertise in the field of health and who had used TRA in a previous research project. Finally, two groups, one that included five pediatricians, three midwives, six nurses, and two general practitioners and another that included four psychologists, responded to the e-mail and assessed the items of the QPBS-EMCA scales. Their task was to assess the grade of representativeness, relevance, and clarity of each item with regard to its location within a scale (e.g., whether an item located within the attitudes scale did indeed refer to an attitude) in the case of the psychologists, or, in the case of the clinical professionals, its relationship to the topic areas. Evaluation was performed using a 5-point Likert scale where 1

indicated *extremely poor* and 5 indicated *very good.* Experts also had the option to add specific comments about the items or the whole subscale.

The working group revised the information provided by the expert groups and reached a consensus to produce the first version of the QPBS-EMCA, modifying items to improve comprehensibility and legibility where necessary and deleting poor-quality items. The item elimination or modification process was undertaken in consideration of quantitative and qualitative aspects. To delete items that were poorly rated, the quantitative analysis was based on median and percentage of agreement. The percentage of agreement was calculated as the percentage of experts who agreed that the item was representative, relevant, or clear (those who scored the item with 3, 4, or 5 points). Two quantitative criteria were used to eliminate items: (a) a median score of 3 or less (for representativeness and relevance) or (b) percentage of agreement of 80% or less (for representativeness and relevance). For example, the item *Mothers breastfeeding in public is frowned upon in my place of work,* included in the Subjective Norms Scale, had low scores of representativeness and was deleted, and the item *I feel satisfied when I reassure a concerned mother about whether she produces enough milk to feed her child* in the Attitudes Scale was deleted because of low relevance. When the representativeness and relevance of an item were adequate but its clarity score was poor, the text of the item was changed based on the experts' comments and suggestions. For example, there were added examples of difficulties in the item *We recommend bottle-feeding when mothers encounter difficulties with breastfeeding (the infant cries a lot or is not sated, the mother is very tired)* in the Subjective Norms Scale.

Quantitative and qualitative analyses were complementary. Qualitative analyses identified pairs of items with very similar content or that differed only in the degree of specification or generality with respect to a topic. In these cases the worst-rated items were eliminated. For example, in the Attitudes Scale, *I like talking to mothers about breastfeeding problems* was chosen over *I like to have the chance to solve problems of breastfeeding mothers.* Finally, according to the suggestions made by the group of psychologists, the item *I would not mind working with support groups* was moved from the Behavior Intention Scale to the Attitudes Scale.

The first version of the questionnaire comprised 78 statements, 21 of which belonged to the Beliefs Scale, 20 to the Attitudes Scale, 19 to the Subjective Norms Scale, and 18 to the Behavioral Intention Scale. Of these items, 31 were worded in a manner in favor of the protection, promotion, and support of breastfeeding activities. The remaining unfavorable items were given negative scores. The average time for completion of all scales of the QPBS-EMCA was approximately 15 minutes.

Sample and Procedure

The research study took place in the Spanish province of Alicante in 2011 with a convenience sample of health care professionals. To determine the preliminary psychometric characteristics of each QPBS-EMCA scale, questionnaires were distributed at two hospitals that were not BFHI-accredited at the time of the survey and five primary care centers within the catchment area of one of the hospitals. These questionnaires were to be completed by maternity and infant health care professionals. Because it was not possible to know a priori the number of professionals who could be given a questionnaire, 300 questionnaires were distributed to obtain a sample of at least 140 responses over the period of 1 week, which satisfied the criterion of 7 responses per item to perform a factor analysis of each scale (Terwee et al., 2007).

Questionnaires were completed voluntarily and anonymously by nursing assistants, nurses, midwives, and physicians and submitted to the research team. Through additional items, questionnaires also gathered demographic information to compare sample characteristics with characteristics of samples in future studies (sex, age, and number of children) as well as details concerning any breastfeeding promotion policy in the workplace and specific breastfeeding training to obtain evidence of external validity. The study received approval from the Ethical Committee of the University of Murcia. Written consent to participate was obtained from all participants.

Data Analysis

Descriptive characteristics of the sample were obtained from the sociodemographic data. A psychometric assessment of the QPBS-EMCA scales was carried out. As a first step in the assessment of construct validity, an exploratory factor analysis was conducted using the iterative principal axis method with varimax rotation

(Terwee et al., 2007). To evaluate the appropriateness of this analysis, the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity were calculated for each scale. The factor solution was determined using the scree-plot method. In addition, mean, standard deviation, and corrected item-total correlations were calculated. Cronbach's internal consistency coefficient was used to estimate reliability. Floor and ceiling effects were calculated using proportion of respondents with lowest or highest total possible scale and subscale scores.

Statistical and substantive criteria were used to determine which items should remain in the final version of the questionnaire. We rejected items with factor loadings or corrected item-total correlations less than 0.3, a high percentage of nonresponse, or ceiling or floor effects of greater than 80%. A limit of 20 items for each of the scales was established to control questionnaire size and reduce respondent burden. However, we believed that the questionnaire should maintain items from all topics that were considered a priority by the research group.

After item reduction, we used the known-groups method to obtain evidence of external validity. The total scores from the Beliefs Scale were expected to relate to specific training received in breastfeeding, based on the assumption that professionals who had received some formal training on breastfeeding should have higher levels of knowledge about breastfeeding than those who had not, as shown in previous studies (Dodgson & Tarrant, 2007; Siddell et al., 2003). Likewise, professionals with higher total scores on the Behavioral Intention and Attitudes Scales were expected to be more interested in receiving new training in breastfeeding than the rest of the professionals, because of their greater willingness to receive a course on breastfeeding in the context of other competing educational priorities (Benoit & Semenic, 2014). Finally, total scores for the Subjective Norms Scale were expected to relate to a global measurement of the institutional norms about breastfeeding, obtained by an item on appraisal of breastfeeding policy in the workplace. Hypotheses were compared using Student's t test for independent samples and analyses of variance. In addition, according to TRA assumptions, it was hypothesized that total scores of the Beliefs, Attitudes, and Subjective Norms Scales would be predictors of total scores of the Behavioral Intention Scale; thus, a multiple regression analysis was carried out.

Results

Participants

A total of 201 questionnaires were collected, of which 12 (6%) were excluded from the psychometric analysis because the QPBS-EMCA had been only partially completed. Of the study participants, 166 (82.6%) were women, and ages ranged from 22 to 65 years (mean = 41.8 ± 10.7 years). Overall, 134 (66.7%) of the respondents had children, and 124 (61.7%) of those children had been breastfed for at least 4 months. See Table 1 for response details on breastfeeding policy in the workplace and specific breastfeeding training.

Psychometric Properties

In a dimensionality analysis of all scales, the sample adequacy rates of the Kaiser-Meyer-Olkin (from 0.79 to 0.88) and Bartlett's test ($p < .01$) showed that the use of factor analysis was appropriate. Tables 2 through 5 list items in the final version of the Beliefs, Attitudes, Subjective Norms, and Behavioral Intention Scales, together with the factor loading, mean, standard deviation, and corrected item–subscale correlation for each item. Table 6 shows the distribution of scores and reliability coefficients for the QPBS-EMCA scales and subscales.

Beliefs Scale. Five items were eliminated, leaving 16 items in the final version of the Beliefs Scale. Factor analysis with a three-factor solution accounted for 39.4% of the total variance; the rotated Factors I, II, and III explained 15%, 13.8%, and 10.6%, respectively.

Factor I of the Beliefs Scale contained items concerning how to maintain breastfeeding over time, Factor II items regarded limitation of the frequency or duration of feeds, and Factor III items were about professional advice related to breastfeeding. Those professionals who had received specific training in breastfeeding obtained significantly higher scores for Factor I ($t = 2.27$; $df = 187$; $p = .02$), Factor II ($t = 2.72$; $df = 187$; $p < .01$), and Factor III ($t = 3.50$; $df = 187$; $p < .01$) compared with those who had not received training.

Attitudes Scale. Thirteen items remained in the final version of the Attitudes Scale. A two-factor solution explained 33.8% of the total variance; the rotated Factors I and II explained 19.1% and 14.7%, respectively. Factor I included items regarding attitudes toward practices

Table 1: Participant Characteristics ($n = 201$)

Characteristic	n (%)
Profession	
Nursing assistant	41 (20.4)
Nurse/midwife	73 (36.3)
Physician/specialist[a]	68 (33.8)
Other	7 (3.5)
No response	12 (6.0)
Workplace	
Elche Hospital	57 (28.4)
Elda Hospital	85 (42.3)
Primary care centers in Elda Health Department	59 (29.3)
Existence of a breastfeeding policy in workplace	
Yes	166 (82.6)
No	15 (7.5)
Don't know	17 (8.4)
No response	3 (1.5)
Appraisal of breastfeeding policy	
Unsuitable	7 (3.5)
Somewhat suitable	21 (10.4)
Suitable	87 (43.3)
Very suitable	52 (25.9)
Unknown	15 (7.5)
No response	19 (9.4)
Breastfeeding policy required in workplace	
Yes	98 (48.8)
No	31 (15.4)
Don't know	7 (3.5)
No response	65 (32.3)
Workplace with BFHI accreditation	
Yes	15 (7.4)
No	94 (46.8)
Don't know	85 (42.3)
No response	7 (3.5)
Breastfeeding training	
Yes	109 (54.2)
No	87 (43.3)
No response	5 (2.5)
Evaluation of own breastfeeding training	
Insufficient	23 (11.4)

(Continued)

Table 1: Continued

Characteristic	n (%)
Appropriate	90 (44.8)
Very good	31 (15.4)
No previous training	1 (0.5)
No response	56 (27.9)
Breastfeeding training interest	
Yes	116 (57.7)
No	41 (20.4)
Don't know	11 (5.5)
No response	33 (16.4)

Note. BFHI = Baby-Friendly Hospital Initiative.
[a]Obstetrician, pediatrician.

facilitating the establishment and continuation of breastfeeding, and Factor II concerned attitudes toward the *Code*. For both factors, the group of professionals who showed interest in breastfeeding training was compared with the group of those who did not. Statistically significant differences were found only for Factor I ($t = 2.76$; $df = 159$; $p < .01$), for which the group of professionals who showed interest in breastfeeding training had higher scores than the group who did not.

Subjective Norms Scale. Seven items were excluded from the first version of the Subjective Norms Scale, leaving 12 items in the final version. A two-factor solution accounted for 37.6% of the total variance. Factor I, regarding norms related to breastfeeding support, explained 20.4% of the total variance, and Factor II, regarding norms related to practices limiting breastfeeding, explained 17.2%.

One analysis of variance was performed for each factor, for which the independent variable was *appraisal of breastfeeding policy in the workplace* with three levels (*unsuitable and somewhat suitable, suitable,* and *very suitable*). For Factor I, for which $F(2, 157) = 5.6$, $p < .01$, those who assessed center breastfeeding policy as poor or inadequate obtained lower mean scores than those whose assessment was more positive, and the same trend was observed for Factor II, $F(2, 159) = 3.4$, $p = .04$.

Behavioral Intention Scale. After eliminating 10 items for statistical and substantive reasons, a unifactorial solution accounted for 43.5% of the

Table 2: Classical Item Test Analysis and Factor Loadings of the Beliefs Scale of the QPBS-EMCA ($n = 189$)

Beliefs Scale Item	Item–Subscale Correlation	Mean ± SD	Factor Loading
Factor I: How to maintain breastfeeding over time			
Exclusive breastfeeding is recommended up to 6 months.	.49	4.1 ± 1.1	.47
Efforts should be made to maintain breastfeeding even when infants are separated from their mothers.	.66	4.5 ± 0.8	.72
Expressed breast milk can be frozen.	.58	4.6 ± 0.9	.69
Information on how to express milk is necessary when breastfeeding mothers are separated from their infants.	.61	4.6 ± 0.7	.74
Breastfeeding support groups play an important role in maintaining breastfeeding.	.50	4.3 ± 0.9	.56
Factor II: Limiting breastfeeding			
Bottle-feeding is the best way to administer formula supplements to infants that need them.	.56	3.2 ± 1.4	.67
Exclusively breastfed infants should also drink water.	.38	4.0 ± 1.2	.40
As a general rule, every 3 hours is a good breastfeeding schedule.	.65	3.3 ± 1.5	.76
Scheduled breastfeeding limits breast milk production.	.43	3.3 ± 1.4	.46
Infants should not feed for more than 10 minutes on each breast per session.	.54	3.4 ± 1.4	.66
Factor III: Professional advice related to breastfeeding			
Breastfeeding is beneficial to maternal health.	.38	4.4 ± 0.9	.49
Breastfed infants tend to enjoy better health than those fed formula.	.34	4.0 ± 1.1	.56
Mother and newborn skin-to-skin contact immediately after birth is important to establish breastfeeding.	.39	4.5 ± 0.9	.55
Breastfeeding should be maintained until at least 2 years of age.	.35	3.1 ± 1.2	.41
The presence of infant formula advertising in health care centers does not influence a mother's decision to breastfeed.	.39	3.2 ± 1.3	.41
Health care professionals should avoid giving mothers gift packs containing pacifiers or infant formula.	.42	3.4 ± 1.3	.44

Note. An English translation of the items of the QPBS-EMCA is shown. QPBS-EMCA = Questionnaire of Professional Breastfeeding Support of the Healthcare Quality Management Program of Murcia.

total variance, with eight items remaining in the final version of the Behavioral Intention Scale. Behavioral intention differences in terms of interest in receiving breastfeeding training were analyzed, and statistically significant differences were found ($t = 3.48$; $df = 67$; $p < .01$) between those who were interested in receiving new training, with higher scores, and those not interested, who received lower scores.

Prediction of behavioral intention. A multiple regression analysis showed that the model that used total scores of the Behavioral Intention Scale as the criterion variable and total scores for the Beliefs, Attitudes, and Subjective Norms Scales as predictor variables was statistically significant, (adjusted $R^2 = .49$, $F(3, 189) = 61.69$, $p < .01$). The components with the highest standardized beta coefficients were beliefs ($\beta = .38$; $t = 5.08$; $p < .001$) and attitudes ($\beta = .258$; $t = 3.56$; $p < .001$).

Discussion

To improve breastfeeding rates, the BFHI has become a national health care priority in many

> **The QPBS-EMCA incorporates valid and reliable tools to assess health care providers' beliefs, attitudes, subjective norms, and behavioral intention related to breastfeeding support.**

countries, and numerous hospitals are attempting to implement this initiative. Health care providers' beliefs and attitudes about breastfeeding and the BFHI are the most frequently mentioned obstacles when an implementation process is described (Bartick et al., 2009; Benoit & Semenic, 2014; Semenic et al., 2012). In this article we have presented comprehensive, valid, and reliable tools for assessing the beliefs, attitudes, subjective norms, and behavioral intention of health care providers in hospital or community settings related to the protection, promotion, and support of breastfeeding, especially those based on the BFHI.

When a questionnaire is used to obtain scores for prediction, classification, or assessment, it is important to determine properties related to its content and measurement, validity, and reliability (Terwee et al., 2007). Differences in content with previous questionnaires are related to the measurement aim of the questionnaire, the target population, the concepts it is intended to measure, and the methods for item selection and reduction.

Global Criteria for the BFHI, the *Code*, and the TRA provided a clear framework during item definition and ensured the suitability of the QPBS-EMCA for the assessment of different health care professionals' adherence to quality improvement processes aimed at protection, promotion, and support of breastfeeding. None of the previous tools had included Global Criteria or the *Code* to specifically guide the item development process,

Table 3: Classical Item Test Analysis and Factor Loadings of the Attitudes Scale of the QPBS-EMCA (*n* = 189)

Attitudes Scale Item	Item–Subscale Correlation	Mean ± *SD*	Factor Loading
Factor I: Attitudes toward practices facilitating establishment and continuation of breastfeeding			
I think it is unnecessary to discuss the benefits of breastfeeding with pregnant women.	.46	4.7 ± 0.8	.54
I think it is over the top for a mother to initiate breastfeeding immediately after birth.	.52	4.7 ± 0.9	.64
I think that mother and newborn skin-to-skin contact is unnecessary in first half hour after caesarean section.	.52	4.4 ± 1.1	.60
I feel uncomfortable seeing a woman breastfeeding a child more than 1 year old.	.41	4.4 ± 0.9	.47
I think it is unrealistic to recommend that a mother breastfeed on demand.	.55	4.3 ± 1.1	.66
I am not sure about expressed milk.	.51	4.6 ± 0.7	.68
I like talking to mothers about breastfeeding problems.	.26	4.0 ± 1.1	.30
I would not mind working with support groups.	.40	3.7 ± 1.1	.37
Factor II: Attitudes toward *The Code of Marketing of Breast Milk Substitutes*			
I think it is over the top to use a cup or glass to give formula supplements to breastfeeding infants.	.31	3.2 ± 1.4	.35
I think it is excessive to prohibit infant formula advertising in health care centers.	.53	3.3 ± 1.4	.60
I think it is acceptable to give mothers gift packs containing pacifiers.	.62	3.3 ± 1.3	.73
I do not like seeing infant formula advertising in my health center.	.37	2.8 ± 1.3	.49
I think it is excessive to prohibit professionals from giving free samples of infant formula to breastfeeding mothers.	.56	3.1 ± 1.3	.67

Note. An English translation of the items of the QPBS-EMCA is shown. QPBS-EMCA = Questionnaire of Professional Breastfeeding Support of the Healthcare Quality Management Program of Murcia.

Table 4: Classical Item Test Analysis and Factor Loadings of the Subjective Norms Scale of the QPBS-EMCA ($n = 189$)

Subjective Norms Scale Item	Item–Subscale Correlation	Mean ± SD	Factor Loading
Factor I: Norms related to breastfeeding support			
We are all expected to give similar information on breastfeeding.	.59	4.1 ± 1.1	.65
A mother's informed choice about child care is respected.	.58	4.0 ± 1.0	.64
The work of mothers' support groups is appreciated.	.51	3.9 ± 1.0	.63
Formula samples are given to breastfeeding mothers.	.32	4.0 ± 1.1	.35
Breastfeeding training is considered important.	.62	4.3 ± 0.9	.74
Besides information, mothers are given practical help with breastfeeding.	.58	4.0 ± 1.1	.64
Factor II: Limiting breastfeeding			
Pacifiers are recommended to calm babies.	.58	3.5 ± 1.3	.68
We recommend supplementing breastfeeding with formula or other foods from 4 months.	.44	3.7 ± 1.5	.49
We recommend adhering to an infant feeding schedule.	.54	3.5 ± 1.3	.60
We recommend bottle-feeding when mothers encounter difficulties with breastfeeding (the infant cries a lot or is not sated, the mother is very tired).	.46	3.0 ± 1.3	.63
In the case of mastitis, we recommend suspending breastfeeding until the infection has gone.	.47	3.7 ± 1.3	.57
Infant formula advertising (calendars, stationery, stadiometers, etc.) is permitted.	.32	3.0 ± 1.3	.38

Note. An English translation of the items of the QPBS-EMCA is shown. QPBS-EMCA = Questionnaire of Professional Breastfeeding Support of the Healthcare Quality Management Program of Murcia.

and most had not considered a multiprofessional team as a target population. In addition, use of the TRA framework permitted the inclusion of not only personal but also social factors to explain behavioral intention, an aspect of particular importance when changes in the care provided are required at individual and group levels (Semenic et al., 2012). Professional behavior related to changes in practice does not depend solely on personal decision (Nickel, Taylor, Labbok, Weiner, & Williamson, 2013). For instance, trained and motivated professionals could encounter difficulties in gaining the necessary support from their colleagues or institutions, which would render the implementation of any program impossible. One previous study had included the TRA as a framework (Bernaix, 2000), but it was developed including only nurses, and it had other methodologic limitations, as previously explained.

In line with previous recommendations (Terwee et al., 2007), the content validity of the QPBS-EMCA was maximized by employing separate scales to measure the different TRA outcome levels, using an overinclusive initial item pool, and basing item assessment and selection on the expert judgment of a multidisciplinary team that included psychologists and clinical professionals, in addition to the reported statistical criteria. In the present study, the process to obtain evidence of content validity was more comprehensive than that reported in previous studies on variables that influence the behavior of health care professionals related to breastfeeding; previous studies started from a limited number of items and did not refer to any assessment or selection process (Dodgson & Tarrant, 2007; Kang et al., 2005; Martens, 2000; Siddell et al., 2003;) or, moreover, did not specify statistical or other features that were used as the basis for the selection of items before the psychometric analysis (Bernaix, 2000; Brodribb et al., 2008; Ekström et al., 2005).

In general, the QPBS-EMCA scores demonstrated good psychometric properties. There was no prior hypothesis regarding scale dimensionality;

Table 5: Classical Item Test Analysis and Factor Loadings of the Behavior Intention Scale of the QPBS-EMCA ($n = 189$)

Behavior Intention Scale Item	Item–Subscale Correlation	Mean $\pm$ SD	Factor Loading
Inform mothers about the benefits of breast milk.	.67	4.7 $\pm$ 0.6	.77
Encourage mothers to breastfeed their babies for as long as possible.	.58	4.5 $\pm$ 0.8	.64
Show mothers how to recognize and respond to signs of hunger in an infant.	.60	4.5 $\pm$ 0.7	.72
Inform mothers how to continue breastfeeding when they return to paid work.	.69	4.5 $\pm$ 0.7	.80
Participate in training activities to update my knowledge on breastfeeding.	.51	4.3 $\pm$ 0.9	.55
Support mothers' decisions about breastfeeding.	.56	4.5 $\pm$ 0.7	.64
Facilitate contact between mothers and peer support groups.	.67	4.4 $\pm$ 0.8	.71
Avoid the presence of formula advertisements in my workplace.	.31	3.3 $\pm$ 1.3	.32

Note. An English translation of the items of the QPBS-EMCA is shown. QPBS-EMCA = Questionnaire of Professional Breastfeeding Support of the Healthcare Quality Management Program of Murcia.

however, the dimensions identified in the multidimensional scales confirmed that items were grouped in relevant areas of barriers to BFHI implementation encountered by health care providers, as identified in literature searches (Semenic et al., 2012). Factors I and II of the Beliefs Scale, Factor I of the Attitudes Scale, and Factor II of the Subjective Norms Scale are related to the overuse of infant formula and adherence to outdated practices that support breastfeeding. Factor III of the Beliefs Scale, Factor II of the Attitudes Scale, and Factor I of the Subjective Norms Scale coincide with the main problems related to professional advice and support offered to breastfeeding mothers, which include communication styles and adherence to the *Code*.

Table 6: Distribution of Scores and Reliability Coefficients for the QPBS-EMCA Scales and Subscales

Scales and Subscales	Number of Items	Mean $\pm$ SD	Range	Floor, %	Ceiling, %	Cronbach's alpha
Beliefs Scale	16	61.6 $\pm$ 9.3	16–80	—	—	.80
How to maintain breastfeeding over time	5	22.1 $\pm$ 3.2	5–25	1	27.4	.78
Limiting breastfeeding	5	17.0 $\pm$ 4.9	5–25	0	8	.75
Professional advice related to breastfeeding	6	22.5 $\pm$ 4.1	5–25	0	4	.65
Attitudes Scale	13	50.5 $\pm$ 7.7	13–65	—	—	.79
Attitudes toward practices facilitating establishment and continuation of breastfeeding	8	34.7 $\pm$ 4.7	8–40	0	11.4	.75
Attitudes toward *The Code of Marketing of Breast Milk Substitutes*	5	15.8 $\pm$ 4.7	5–25	1.5	4	.71
Norms Scale	12	44.7 $\pm$ 7.8	12–60	—	—	.79
Norms related to breastfeeding support	6	24.3 $\pm$ 4.2	6–30	0	10.4	.78
Limiting breastfeeding	6	20.4 $\pm$ 5.1	6–30	0	4	.73
Behavior Intention Scale	8	34.8 $\pm$ 4.5	8–40	0.5	13.9	.81

Note. QPBS-EMCA = Questionnaire of Professional Breastfeeding Support of the Healthcare Quality Management Program of Murcia.

Furthermore, the total QPBS-EMCA scale scores obtained in the present study showed sufficient criterion-related validity when assessed with behavioral intention. Knowledge and/or beliefs were more influential in the intention to promote breastfeeding than emotional aspects denoted by attitudes and subjective norms. These results are consistent with those reported by Bernaix (2000), illustrating the importance of knowledge. Nevertheless, the results of the present study support the need to consider all the variables of the TRA model. Meanwhile, external validity was supported by the results of the comparison of scores obtained by the known-groups method, which were consistent with most previous hypotheses. Higher scores on the Beliefs Scale were related to specific previous breastfeeding training; professionals who were interested in the receipt of new training obtained higher scores for the Behavioral Intention Scale; and a higher score for the Subjective Norms Scale was related to more positive appraisal of breastfeeding policy in the workplace.

Although professionals with higher scores in Factor I of the Attitudes Scale, related to practices that facilitate the establishment and continuation of breastfeeding, were more likely to be interested in new breastfeeding training, these differences were not observed in Factor II scores for the scale, related to compliance with the *Code*. One explanation for this might be that in a non-BFHI accredited context such as the study hospitals, professionals could consider practices that contravene the *Code* as normal and necessary to inform and support partially breastfeeding or bottle-feeding mothers (McInnes, Wright, Haq, & McGranachan, 2007). Therefore, there would be fewer differences between groups with different levels of interest in breastfeeding training.

With regard to reliability, Cronbach's alpha coefficients were satisfactory for the total scale and subscale scores, which ranged from .65 to .81. In most previous studies (Bernaix, 2000; Brodribb et al., 2008; Dodgson & Tarrant, 2007; Kang et al, 2005; Martens, 2000) no data were available on the factor structure of the scale to determine whether the items form only one overall scale or more than one, and results on internal consistency reliability are difficult to interpret correctly (Terwee et al., 2007). Only two studies included an exploratory factor analysis, and the researchers reported lower (Ekström et al., 2005) or similar (Siddell et al., 2003) reliability results.

The QPBS-EMCA scales could be useful for facilities implementing the Baby-Friendly Hospital Initiative to assess staff adherence, specific training effects, and the prevailing norms related to breastfeeding.

Implications

The QPBS-EMCA could be useful for health care facilities for the initiation or implementation of quality improvement processes based on the BFHI. For example, the scales of the QPBS-EMCA could be used to determine the magnitude of the effect of a training course on the level of knowledge, attitudes, subjective norms, and behavioral intention of the professionals of a given health facility through a comparison of the scores of the dimensions of each scale before and after the course. Moreover, all the QPBS-EMCA scales, and specifically those scales used to assess beliefs, attitudes, and behavioral intention, constitute good tools to assess health professionals' adherence to a quality implementation program related to breastfeeding. Use of these scales could identify professionals to assume a leadership role in the implementation process. Furthermore, the Subjective Norms Scale yields information on professionals' perceptions of the breastfeeding norms prevailing in an institution. These scores can be good indicators of the cultural change that occurs after the implementation of an improvement process. Finally, and in accordance to their content, the dimensions scores in the QPBS-EMCA scales could be used in isolation. For example, and to design better training interventions tailored to each group, the total scores in Factor II of the Attitudes Scale may facilitate the comparison of attitudes related to the *Code* among different professional groups.

Whether the professionals included in the sample were more in favor of breastfeeding protection, promotion, and support compared with non-respondents is unknown; this represents a possible limitation of the study. Although initial support for the validity and reliability of the QPBS-EMCA was provided, the instrument must be tested in more diverse contexts. Furthermore, future research about the capacity of the QPBS-EMCA to detect significant changes over time should be conducted to provide further information about attributes and criteria.

Conclusions

The results of our study indicate that the four scales included in the QPBS-EMCA can be

considered valid and reliable measures to evaluate health care professionals' beliefs, attitudes, subjective norms, and behavioral intention related to the protection, promotion, and support of breastfeeding. Total scores for the Beliefs, Attitudes, and Subjective Norms Scales predicted scores for the Behavioral Intention Scale.

Scores for the different QPBS-EMCA scales were related to relevant variables in quality improvement processes based on the BFHI, such as professionals' specific previous breastfeeding training and interest in new training or appraisal of breastfeeding policy in the workplace. The QPBS-EMCA could be useful to evaluate variables related to the breastfeeding support behavior of different professionals in health care facilities that implement quality improvement processes based on the BFHI.

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Supplementary Material

Note: To access the supplementary material accompanying this article, visit the online version of the *Journal of Obstetric, Gynecologic, & Neonatal Nursing* at http://jognn.org, and at http://dx.doi.org/10.1016/j.jogn.2015.12.002.

REFERENCES

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior.* Englewood Cliffs, N.J: Prentice-Hall.

Bartick, M., Stuebe, A., Shealy, K. R., Walker, M., & Grummer-Strawn, L. M. (2009). Closing the quality gap: Promoting evidence-based breastfeeding care in the hospital. *Pediatrics, 124*(4), e793–e802. http://dx.doi.org/10.1542/peds.2009-0430

Benoit, B., & Semenic, S. (2014). Barriers and facilitators to implementing the Baby-Friendly Hospital Initiative in neonatal intensive care units. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 43*(5), 614–624. http://dx.doi.org/10.1111/1552-6909.12479

Bernaix, L. W. (2000). Nurses' attitudes, subjective norms, and behavioral intentions toward support of breastfeeding mothers. *Journal of Human Lactation, 16*(3), 201–209. http://dx.doi.org/10.1177/089033440001600304

Brodribb, W., Fallon, A., Jackson, C., & Hegney, D. (2008). Breastfeeding and Australian GP registrars—Their knowledge and attitudes. *Journal of Human Lactation, 24*(4), 422–430. http://dx.doi.org/10.1177/0890334408323547

Cattaneo, A., Burmaz, T., Arendt, M., Nilsson, I., Mikiel-Kostyra, K., Kondrate, I., … Fallon, M. (2010). Protection, promotion and support of breast-feeding in Europe: Progress from 2002 to 2007. *Public Health Nutrition, 13*(6), 751–759. http://dx.doi.org/10.1017/S1368980009991844

De Bruin-Kooistra, M., Amelink-Verburg, M. P., Buitendijk, S. E., & Westert, G. P. (2012). Finding the right indicators for assessing quality midwifery care. *International Journal for Quality in Health Care, 24*(3), 301–310. http://dx.doi.org/10.1093/intqhc/mzs006

DiGirolamo, A. M., Grummer-Strawn, L. M., & Fein, S. B. (2008). Effect of maternity-care practices on breastfeeding. *Pediatrics, 122*(Suppl 2), S43–S49. http://dx.doi.org/10.1542/peds.2008-1315e

Dodgson, J. E., & Tarrant, M. (2007). Outcomes of a breastfeeding educational intervention for baccalaureate nursing students. *Nurse Education Today, 27*(8), 856–867. http://dx.doi.org/10.1016/j.nedt.2006.12.001

Eccles, M. P., Armstrong, D., Baker, R., Cleary, K., Davies, H., Davies, S., … Sibbald, B. (2009). An implementation research agenda. *Implementation Science: IS, 4*(1), 18. http://dx.doi.org/10.1186/1748-5908-4-18

Ekström, A., Matthiesen, A., Widström, A. M., & Nissen, E. (2005). Breastfeeding attitudes among counselling health professionals. *Scandinavian Journal of Public Health, 33*(5), 353–359. http://dx.doi.org/10.1080/14034940510005879

García-de-León-González, R., Oliver-Roig, A., Hernández-Martínez, M., Mercader-Rodríguez, B., Muñoz-Soler, V., Maestre-Martínez, M. I., … Monreal-Tomás, A. B. (2010). Becoming baby-friendly in Spain: A quality-improvement process. *Acta Paediatrica, 100*(3), 445–450. http://dx.doi.org/10.1111/j.1651-2227.2010.02061.x

Groene, O., Klazinga, N., Kazandjian, V., Lombrail, P., & Bartels, P. (2008). The World Health Organization Performance Assessment Tool for Quality Improvement in Hospitals (PATH): An analysis of the pilot implementation in 37 hospitals. *International Journal for Quality in Health Care, 20*(3), 155–161. http://dx.doi.org/10.1093/intqhc/mzn010

Johnston, M., Landers, S., Noble, L., Szucs, K., & Viehmann, L. (2012). Breastfeeding and the use of human milk. *Pediatrics, 129*(3), e827–e841. http://dx.doi.org/10.1542/peds.2011-3552

Kang, N.-M., Song, Y., & Im, E.-O. (2005). Korean university students' knowledge and attitudes toward breastfeeding: A questionnaire survey. *International Journal of Nursing Studies, 42*(8), 863–870. http://dx.doi.org/10.1016/j.ijnurstu.2005.01.003

Lillehoj, C. J., & Dobson, B. L. (2012). Implementation of the Baby-Friendly Hospital Initiative steps in Iowa hospitals. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 41*(6), 717–727. http://dx.doi.org/10.1111/j.1552-6909.2012.01411.x

Martens, P. J. (2000). Does breastfeeding education affect nursing staff beliefs, exclusive breastfeeding rates, and Baby-Friendly Hospital Initiative compliance? The experience of a small, rural Canadian hospital. *Journal of Human Lactation, 16*(4), 309–318. http://dx.doi.org/10.1177/089033440001600407

McInnes, R. J., & Chambers, J. A. (2008). Supporting breastfeeding mothers: Qualitative synthesis. *Journal of Advanced Nursing, 62*(4), 407–427. http://dx.doi.org/10.1111/j.1365-2648.2008.04618.x

McInnes, R. J., Wright, C., Haq, S., & McGranachan, M. (2007). Who's keeping the code? Compliance with the international code for the marketing of breast-milk substitutes in Greater Glasgow. *Public Health Nutrition, 10*(7), 719–725. http://dx.doi.org/10.1017/S1368980007441453

Nickel, N. C., Taylor, E. C., Labbok, M. H., Weiner, B. J., & Williamson, N. E. (2013). Applying organisation theory to understand barriers and facilitators to the implementation of baby-friendly: A multisite qualitative study. *Midwifery, 29*(8), 956–964. http://dx.doi.org/10.1016/j.midw.2012.12.001

Oliver-Roig, A. (2013). Early breastfeeding cessation in infants: Causes and solutions. In R. Ross Watson, G. Grimble, V. R. Preedy, & S. Zibadi (Eds.), *Nutrition in infancy* (1st ed., Vol. 1, pp. 247–263).

New York, NY: Humana Press (Springer Science+Business Media). http://dx.doi.org/10.1007/978-1-62703-224-7_17

Patel, R., Oken, E., Bogdanovich, N., Matush, L., Sevkovskaya, Z., Chalmers, B., … Martin, R. M. (2014). Cohort profile: The promotion of breastfeeding intervention trial (PROBIT). *International Journal of Epidemiology, 43*(3), 679–690. http://dx.doi.org/10.1093/ije/dyt003

Saadeh, M. R. (2003). A new global strategy for infant and young child feeding. *Forum of Nutrition, 56,* 236–238.

Schmied, V., Thomson, G., Byrom, A., Burns, E., Sheehan, A., & Dykes, F. (2014). A meta-ethnographic study of health care staff perceptions of the WHO/UNICEF Baby Friendly Health Initiative. *Women and Birth, 27*(4), 242–249. http://dx.doi.org/10.1016/j.wombi.2014.05.005

Semenic, S., Childerhose, J. E., Lauziere, J., Groleau, D., Lauzière, J., Groleau, D., & Lauziere, J. (2012). Barriers, facilitators, and recommendations related to implementing the Baby-Friendly Initiative (BFI): An integrative review. *Journal of Human Lactation, 28*(3), 317–334. http://dx.doi.org/10.1177/0890334412445195

Siddell, E., Marinelli, K., Froman, R. D., & Burke, G. (2003). Evaluation of an educational intervention on breastfeeding for NICU nurses. *Journal of Human Lactation, 19*(3), 293–302. http://dx.doi.org/10.1177/0890334403255223

Spanish BFHI Association. (2015). *Hospital register | BFHI*. Retrieved from http://www.ihan.es/centros-sanitarios/registro-de-hospitales

Spanish Ministry of Health and Social Policy. (2009). *Hospital maternity standards and recommendations*. Madrid, Spain: Author.

Retrieved from http://www.msssi.gob.es/organizacion/sns/planCalidadSNS/docs/AHP.pdf

Spanish Ministry of Health and Social Policy. (2013). *Spanish National Health Survey 2011/2012*. Madrid, Spain: Author. Retrieved from http://www.msssi.gob.es/estadEstudios/estadisticas/encuestaNacional/encuestaNac2011/encuestaResDetall2011.htm

Taylor, C., Gribble, K., Sheehan, A., Schmied, V., & Dykes, F. (2010). Staff perceptions and experiences of implementing the Baby Friendly Initiative in neonatal intensive care units in Australia. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 40*(1), 25–34. http://dx.doi.org/10.1111/j.1552-6909.2010.01204.x

Terwee, C. B., Bot, S. D. M., de Boer, M. R., van der Windt, D. A. W. M., Knol, D. L., Dekker, J., … de Vet, H. C. W. (2007). Quality criteria were proposed for measurement properties of health status questionnaires. *Journal of Clinical Epidemiology, 60*(1), 34–42. http://dx.doi.org/10.1016/j.jclinepi.2006.03.012

Weddig, J., Baker, S. S., & Auld, G. (2011). Perspectives of hospital-based nurses on breastfeeding initiation best practices. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 40*(2), 166–178. http://dx.doi.org/10.1111/j.1552-6909.2011.01232.x

World Health Organization. (1981). *The International Code of Marketing of Breast-milk Substitutes*. Geneva: WHO. Retrieved from http://www.who.int/nutrition/publications/code_english.pdf

World Health Organization, & United Nations International Children's Emergency Fund. (2009). *Baby-Friendly Hospital Initiative: Revised, updated and expanded for integrated care*. Geneva, Switzerland: World Health Organization.