

Impact of Hospital Breast Feeding Awareness Among Lactating Mothers in Maternal and Children Hospital, AL-Hassa, Kingdom of Saudi Arabia

Esra O. Takrouni¹, Rawabi A. Al Dawlah¹, Shaimaa Khalifah¹, Gihan Y. Ali¹ & Farah M. Al-Aithan¹

¹ College of Medicine, King Faisal University, Al-Hassa, Kingdom of Saudi Arabia

Correspondence: Esra O. Takrouni, College of Medicine, King Faisal University, Al-Hassa, Kingdom of Saudi Arabia. Tel: 966-554-827-720. E-mail: esratakrouni@gmail.com

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Abstract

Background & Aim: Insufficient knowledge and practice of breastfeeding may have serious disadvantages both on mother and child health. This study explores methods used in MCH based breastfeeding awareness program, level of benefit gained by newly delivered mothers after receiving the awareness, and the impact of mother's sociodemographic on the level of perceived benefit gained by them.

Subjects & Methods: A prospective cross-sectional study applying random sampling technique was established. A self-administered questionnaire was distributed targeting newly delivered mother in maternal and child hospital in Al-Hassa, Saudi Arabia. It included two main parts: socio-demographic characteristics of the mothers, and questions related to the hospital breastfeeding awareness program.

Results: from the overall sample, hospital awareness was received by 47.5% of newly delivered mothers. The most common method to provide the knowledge was the Verbal demonstration representing 50% of the mothers. They were followed by brochures representing 39% and last, audios constituting only 3.6%. From these methods, the verbal demonstration showed to be the one with the highest level of satisfaction and benefit reaching up to 85%.

Conclusion: Breastfeeding awareness has a significant impact among both newly and non-newly delivered mothers with Hospitals playing a major role in this health education. The choice of method to provide breastfeeding awareness can contribute to the compliance of mothers as well as the level of their benefit and satisfaction.

Keywords: breastfeeding, hospital awareness, lactating mothers, newly mother

1. Introduction

Child care is essential for any mother. A number of studies demonstrated that mothers' education has a great influence on their practice concerning child health. One of the core aspects of the mother's education is the awareness regarding breastfeeding (Al-Ayed, 2010).

Breastfeeding is known to be an ancient and reliable method of infant feeding. Breast milk showed to enhance the physical, psychological and emotional Aspects of the infant as well as the breastfeeding mothers (Ogbeide et al., 2004). From an infant's health point of view, breastfeeding improves the nutritional status of infants as well as the immunological level by playing an essential role in preventing infections in the newborn (El Mouzan et al., 2009). From a maternal point of view, it is considered a natural instinct for any mother as it allows her to show her devotion and care for her children (Al-Amoud, 2003). A recommendation for breastfeeding has been issued by several professional agencies and societies including the American Academy of Pediatrics, the United Nations Children Funds (UNICEF) and the American Dietetic Association (Al-Amoud, 2003).

These recommendations described breastfeeding as the best way of feeding for newborn and infant. The World Health Organization (WHO) recommended exclusive breastfeeding for the first six months of life, giving the mother a choice to continue breastfeeding afterward (Senarath, Dibley & Agho, 2010). This duration is vitally important to ensure a healthy life and wellbeing for those children. (Cwiek et al., 2010). From a health care point of

view, breastfeeding is seen as a public health strategy for improving infant, child, and maternal mortality and morbidity. It also helps to control health care costs and expenditure (Al-Binali, 2012).

As an integrated part of maternal and child health, health care professionals are obligated to provide updated education for mothers regarding the benefit of breastfeeding (Alwelaie et al., 2010). All medical staff and midwives should offer information as well as emotional and technical support for mothers throughout the entire period of lactation (Klejewski et al., 2012).

1.1 Research Questions

- What are the methods used for awareness in hospital-based breastfeeding awareness program?
- How did mothers perceive these methods as being beneficial?
- What is the relation between mother's sociodemographic and the level of perceived benefit gained by them?

1.2 Aim

To explore methods used in Maternal and Children Hospital based breastfeeding awareness program, level of benefit gained by newly delivered mothers after receiving the awareness, and the impact of mother's sociodemographic on the level of perceived benefit gained by them.

2. Literature review

Several previous studies about improving breastfeeding knowledge, attitudes, and practices have documented the importance of health professional support for breastfeeding promotion (Khoury et al., 2002).

These studies indicate the vital role of hospital-based breastfeeding program to improve the overall knowledge and practice of mothers.

In Saudi Arabia, the awareness done in hospitals regarding the importance of breastfeeding have shown low levels. Several studies were done to investigate breastfeeding practice and factors affecting it in the kingdom of Saudi Arabia (Alwelaie et al., 2010), (Al-Hreashy et al., 2008). Most of these studies were done in Riyadh, and others were done in al-Khobar, Abha and Al- kharj regions.

2.1 First, Four Studies Were Done in Riyadh

In 2009 a study was conducted in three major hospitals in Riyadh to examine Saudi mother's knowledge and practice regarding breastfeeding. The study included eight hundred and forty-eight mothers during their post-delivery period as well as mothers attending the antenatal clinics. An Arabic questionnaire was distributed and answered by the targeted population. The results showed that only 55.8% have a prior education regarding breastfeeding, and about 54.2% received it during their stay in the hospital. About 48.5% used mixed feeding, on the other hand (36.8%) preferred exclusive breastfeeding during the first six months of life. Different reasons were mentioned, for example, illness of the baby (38.2%), secession of breastfeeding for medical reasons (61.1%), mother sickness or consumption of certain medication (71.8%), at last, the use of contraception (32.8%). The study concluded that practice of exclusive breastfeeding was not conducted according to recommendation raising the need for more targeted awareness program especially from the health care society as half of the women receives their first education in the hospital (Alwelaie et al., 2010).

The second study was carried out in the same city including four primary care centers, and well-baby clinic at King Abdulaziz Medical City. It investigated a total number of 578 infants ranging from 6 to 7 months old. An Arabic questionnaire was generated and distributed gathering data related to mothers and their children and breastfeeding habits. The result showed that initiation of breastfeeding reached up to 95% despite the length of breastfeeding. However, the majority of mothers (83.7%) indicated to give milk formula during the first six months with (75.7%) introducing it at the neonatal period. It was noticed that most of the infants (94.3%) had an addition to their diet during the same period in the form of water, baby tea, herbs, and dates. About (89.2%) introduced baby food to their infants approximately by the age of 4-6 months. The study demonstrated as well an inverse relationship between the formula introduction and the lactation duration. It also showed a decline by half in numbers of lactating mothers in comparison to initiation at the age of 6 months. The most common reasons included insufficient milk (49.6%), and breastfeeding difficulties (11.6%), which were gathered from responses like: "refusal of the breast," "improper latch on," "sore nipple," "pain" and "infection (Al-Hreashy et al., 2008).

The next study was done at the pediatric outpatient clinic of King Khalid University Hospital. The sample included 373 questionnaires distributed among mothers attending the clinic. The survey included two parts. The first part contained information about the mother's sociodemographic data, and the second part comprises questions

regarding child well-being and health. A total score of 40 was given for the statements in the questionnaires with the highest score of 40, and the reported score of 25 declared as satisfactory. Results of the study showed that The mean knowledge score was 25 (out of 40), the least score recorded was 14, and the highest was 36. 58.4% of mothers scored 25 or more. The primary source of health information was (80%) family members, (27.1%) books, (8.2%) schools, (17.2%) TV and radio, (16%) journals and magazines, and only (7.1%) for health care professionals. It concluded that mothers knowledge in child health is considered deficient, as well as the Health care sector having an insufficient contribution to maternal awareness. Therefore, more effort should be generated to improve the mother's education regarding child health. This matter should be addressed by school and health care facilities as well (Al-Ayed, 2010).

The last study done in Riyadh was nationwide nutritional survey included 5339 mothers of children less than three years of age as part of the Health Profile for Saudi Children

and Adolescents Project. The dietary section of a validated questionnaire was administered. It included items regarding the initiation and timing of breastfeeding as well as barrier to breastfeeding continuation. The result showed an attitude of initiation of breastfeeding in 91% of the mothers. It was followed by a drop in the attitude of breastfeeding from 88.6% at birth to 1.8% at 12 months. Nearly 80% of the infants were started on bottle milk formula by four and six months, respectively. "Solid" food was given to 81.5% of infants by the age of 4 to 6 months. The study demonstrated that many mothers are willing to initiate breastfeeding, but many fail to continue until the period recommended by the WHO. Awareness regarding breastfeeding should be made a public health priority, and more research should be done regarding this aspect of child health (El Mouzan et al., 2009).

2.2 Second, one study was conducted in Al-Khobar city, Eastern province.

It analyzed the predictor factors affecting exclusive breastfeeding practice. Around 400 fertile women with living children, less than five years of age agreed to take part in the study. Data were collected using an interview questionnaire which was composed of two main elements: socio-demographic characteristics, and questions assessing the level of mother's knowledge. The result demonstrated the total percent of mothers with adequate knowledge and practice toward breastfeeding were 91.8%, and 91.5%, respectively. 79.5%, used mixed feeding (breastfeeding complemented by bottle feeding). Only 19.2% of the studied women used exclusive breastfeeding. Family size and paternal education were the most influential factors that influenced the continuation of exclusive breastfeeding. The study concluded that Knowledge and practice of Saudi women regarding breastfeeding were satisfactory, but their practice of absolute breastfeeding was less than adequate. Therefore, promoting and protecting the practice of exclusive breastfeeding need to be adequate (Al-Yousif et al., 2011).

2.3 The third study was done in Abha Southwestern region, Saudi Arabia

The total number of participants were 384 women who met the criteria of being school teachers having a child aged five years or less. The questionnaire was structured using the Delphi technique and was distributed among the targeted population. It included two sections, first: demographic, and biological data, second: questions examining knowledge and attitude toward exclusive breastfeeding. The study showed that 31% of mothers had breastfed their infants for the first time directly after delivery. 90.9% of the respondent had mixed feeding in the form of breast milk combined with formula feeding. While only 9.1% breastfed their children exclusively. 8.3% continue to breastfeed solely till the period of 6 months while others 44% contributed the discontinue of breastfeeding to reasons such as Insufficient breast milk and work burden. As for mother's willingness for education regarding breastfeeding, 8.6% had already participated in classes related to breastfeeding education, but the majority representing 68% showed interest to participate in such courses, if available in future pregnancies (Al-Binali, 2012).

2.4 Another study was carried out in Al kharj city discussing the influencing factors affecting exclusive breastfeeding as well

In this study, 704 questionnaires were distributed among women in childbearing age visiting Al Kharj Health Centre. Participants were grouped according to their status regarding breastfeeding into exclusive feeding, mixed feeding (breastfeeding with bottle feeding), and bottle feeding. Results showed that mixed feeding was the dominant mode of infant feeding representing 66.1% of mothers. Exclusive breastfeeding was the next most common representing 27.3%. Finally, exclusive bottle feeding showed to be the lowest representing 6.7% of mothers. Four main factors proved to be significant regarding the exclusive mode of breastfeeding; it included partner's educational level, non professional breastfeeding advices, bottle feeding being given among discharge, and the use of contraception (Ogbeide et al., 2004).

Both studies concluded that mixed feeding or partial breastfeeding is the dominant practice for the majority of

mothers. It also illustrated the importance of breastfeeding awareness as most mothers are willing to practice breastfeeding if they had an appropriate awareness method.

2.5 Finally, the last study was done in Al-HASA, Saudi Arabia

The study analyzed the Determinants of Initiation and Exclusivity of Breastfeeding in Al Hassa region. A sample of 641 mothers with infants aged 24 months or less was interviewed. The results demonstrated that 77.8% of mothers were willing to breastfeed within the first 24 hours. This rate showed a progressive decline during the first six months reaching up to 12.2%. Several factors showed to affect the practice of breastfeeding such as mothers age, education, and work status. The study emphasized the presence of various misconception regarding breastfeeding among mothers. About 47.0% thought that breastfeeding causes increase in weight and change the breast shape. Around 60.0% believed that pregnancy is a contraindication for breastfeeding. 28.9% agreed to stop breastfeeding if stomachache occurred like in the cases of diarrhea. 32.3% confirmed that mixed feeding should be introduced by three months of age, and 55.9% failed to define the recommended duration for exclusive breastfeeding. The study concluded that the mother's level of education and awareness is far behind the WHO goal. More comprehensive and long term awareness programs are needed to help mothers reach the desired benefit indicated by the WHO (Amin, Hablas & Al Qader, 2011).

3. Subject and methods

3.1 Study design and data collection

A random prospective cross-sectional study was conducted on maternal and children hospital in Al-Hassa, Saudi Arabia, in the year of 2014 for one month.

The study sample included Saudi women who newly delivered their baby, excluding non-Saudi mothers or those who exceeded the current hospital admission. One hundred mothers were interviewed, 61 out of them met the research criteria.

After obtaining the consent, Well-trained medical students administered a questionnaire using a face to face interview; the primary goal was to examine the impact of hospital breastfeeding awareness on their current practices.

3.2 Research tool

An Arabic questionnaire was distributed among the mothers.

The questionnaire was designed based on data collected from previously conducted studies testing the factors impacting breastfeeding awareness among mothers. The survey was tested to suit the availability of awareness in MCH hospital. Finally, it was reviewed and approved by a valid professor and analyst. After which it was distributed among the participating mothers.

It included Socio demographical data: the age of mothers in years, educational status, number of children, previous knowledge about breastfeeding, the source of this knowledge and whether those mothers had hospital awareness or not. According to their state regarding hospital awareness, the studied mothers were grouped into two groups. Group I (mothers who received hospital awareness, and Group II (mothers who did not receive hospital awareness).

3.3 Data management and analysis

The data were assembled and analyzed using SPSS version 17. Nominal variables were expressed using mean, SD and range. Categorical variables were expressed using numbers and percentage.

A chi-square test was applied to define the relationships between the different categorical variables. The significance was determined to be less than 0.05.

3.4 Ethical considerations

Approval was obtained from the college's research committee, and the permission & acceptance of the ethical and research committee of the MCH hospital and Ministry of Health was taken as well.

Written approval was acquired from all the participants in this study after they were informed about the aim, and content of the study. Participants were reassured about the full confidentiality of their data. All the mothers agreed to participate in the questionnaire.

4. Results

This study was conducted among 61 lactating mothers who were interviewed by medical students from KFU colleague of medicine and had a 100% response rate. The socio-demographic characteristics of the mothers, the

number of mothers who received and did not receive the awareness from the hospital are shown in Table 1.

Table 1. Distribution of studied women according to their socio-demographic characteristics in the selected hospital (n=61)

	Group I(RHA)* 29 (47.5%)	Group II(NRHA)* 32(52.5%)
Age (mean ± SD)	30 ± 5.9	27.7 ± 6.4
Number of Children		
0 < 1	9 (31%)	12(37.5%)
1-3	12 (41%)	15(46.8%)
>3	8 (27.5%)	6(18.7%)
Previous knowledge		
Knowledgeable	27(93%)	22(68.7%)
Non-knowledgeable	2(6.9%)	10(31%)
Effect of Previous knowledge		
Effective	15 (51.7%)	10 (31%)
Non- effective	12 (41%)	12 (37.5%)
Education status		
Illiterate	1(3.4%)	2(6.2%)
Elementary	1(3.4%)	5(15.6%)
Intermediate	5(3.4%)	1(3%)
High school	14(48%)	5(15.6%)
Bachelor	6 (20.6%)	13(40.6%)
Seminar	-	2(6%)

*Note. RHA=received hospital awareness, NRHA=did not Receive hospital awareness.

As demonstrated in Table 1, the number of mothers in group I (mothers who received hospital breastfeeding awareness) were less than group II (mothers who did not receive hospital breastfeeding awareness) with a rate of (47.5%) in comparison to (52.5%). The mean age of mothers in group I was 30.1 parallel to 27.7 for those in group II. Most of the mothers in group I (41.3%) had from one to three children in relation to (46.8%) in Group II. About 93 % of group I had previous knowledge about the importance of breastfeeding. Most of those mothers 51.7 % acknowledged gaining benefit from their previous knowledge. In group II 68.7% of mothers had prior knowledge about breastfeeding, among them 31.2% acknowledged to gain benefit as well. Sociodemographic characteristics showed that the majority of mothers in group I had a high school education representing 48% and bachelor degree representing 20.6%.

Table 2. Mother's perceived benefit from variable awareness methods.

	Total number of mothers receiving hospital awareness 29 (47.5%)				Significance
	Very good	Good	Nothing	Total	
Brochure	9 (81.8%)	2 (18.2%)	-	11(39%)	0.6
Verbal	12 (85.7%)	1 (7%)	1 (7%)	14 (50%)	0.4
Audio	1(3.6%)	-	-	1 (3.6%)	0.9
Brochure + Orally	3(10.7%)	-	-	3 (10.7%)	0.8

As noted in Table 2, most of the mothers in group I who were involved in the hospital breastfeeding awareness program perceived to gain more benefit from Verbal education in comparison to other methods of awareness. 50% of the mothers received the knowledge in the form of Verbal training delivered by the hospital staff and health care educator. It was Followed by 39% who received brochures with all the information, but no demonstration was done. Education of 3.6% of mothers was performed through audio records, and 10.7% received both brochure and verbal awareness. Based on data analysis, verbal instruction showed a significant of 0.4 in comparison to other methods of awareness. It demonstrated no significant relationship between the modes of awareness and the level of mother's benefit. But referring to the given clinical significant which showed the majority 85% demonstrated to have greater benefit from oral education as a method for awareness.

Table 3. Association between benefit from hospital awareness and mother's educational status

	Benefit from hospital awareness		Total
	Yes	No	
High Education	6(100%)	-	6(20.6%)
Low Education	20(95.2%)	1(4.7%)	21(72.4%)

As shown in Table 3, it was observed that 20.6 % of the mothers representing highly educated mothers (having high school education and above) had 100% benefit from the awareness in contrast 72.4% serving low educated mothers with 95.2% of them perceived to have profited from the awareness program. It was noticed that most of those mothers got to benefit from the awareness as it either added to their previous knowledge or corrected false information. When analyzing the data, it was determined that there is no statistical significance between the educational status and the level of benefit for breastfeeding.

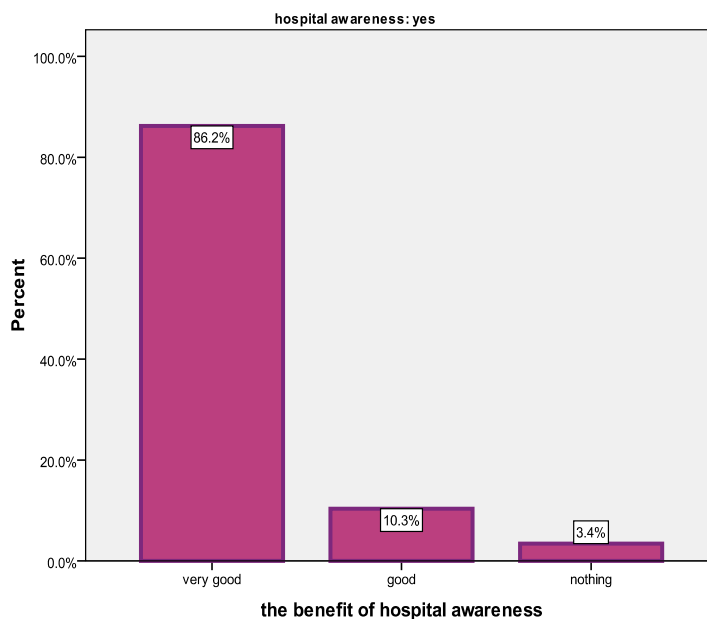


Figure 1. Distribution of studied mothers according to their benefits from hospital awareness

Depending upon illustration shown in Figure 1, the hospital awareness program demonstrated to be effective comparing the evaluation of levels of benefit given by the mothers. 86.2% from the mothers who received the hospital awareness evaluated the benefit as very good, followed by 10.3% who evaluated the benefit as good knowledge, the remaining 3.4% didn't perceive to gain any benefit from the hospital awareness.

The questionnaire interview viewed the option of having an educational seminar regarding breastfeeding awareness. Around 62.9% of the mothers who did not obtain hospital awareness showed enthusiasm to attend as they perceive it as a reliable source of knowledge.

4. Discussion

Worldwide feeding limited to mother's milk is the optimal method for child development and well-being. Countless benefits for both maternal and child health are well proved in variable literature (Al-Yousif et al., 2011). Our study aimed to explore methods used in MCH based breastfeeding awareness program, level of benefit gained by newly delivered mothers after receiving the awareness, and the impact of mother's sociodemographic on the level of benefit gained by them.

Considering this purpose, the prevalence of mothers receiving hospital awareness was only 47.5%. Our study has shown that maternal age has a significant impact on the level of benefit perceived by mothers from breastfeeding awareness program. It demonstrated that older mothers perceive more benefit from awareness in comparison to the younger one. This finding was compatible with the previous study done by (Al-Yousif et al., 2011) from Saudi Arabia, which has reported that maternal age was a significant independent predictor for breastfeeding initiation and feeding choice (Al-Yousif et al., 2011). Another study was done by Al-Jassir et al., (2006), disagreed with the proposed result as they concluded that the younger generations were more informed and enthusiastic than older mothers (Al-Jassir et al., 2018). Concerning the other factor which is parity, our study concluded that there is no significant influence of the parity of mothers in their attitude toward breastfeeding initiation and duration. This conclusion was opposite to what was demonstrated by Trussell et al., (2011); concluded that the higher parity mothers have the longest they tend to breastfeed their infants (Trussell et al., 1992). In this study, the relationship between different methods used for awareness and the level of mother's knowledge was described as being satisfactory. Similar results were obtained from a questionnaire conducted by Al-Yousif G et al. (2011); which demonstrated a satisfactory knowledge and attitude for Saudi mothers toward breastfeeding (Al-Yousif et al., 2011). However, the current study demonstrated the effectiveness of awareness method in relation to the level of mothers' benefit, unlike the previous studies where the overall knowledge was evaluated regardless of the reference or awareness program role in obtaining this knowledge.

In our study, we found that there is no statistically significant effect of educational status in the level of benefit obtained from the awareness program, but the considerable results show high education level are more likely to gain benefit from the awareness giving a percentage of 100 % in comparison to low education status having a rate of 95.2%. This finding was compatible with other studies done by Al-Yousif G et al., (2011), and Amin, (2011). The first study indicated no statistically significant difference in the level of knowledge of studied women as 91.8% of all studied women had overall good knowledge. The second study demonstrated no statistically significant effect, but the mean knowledge score indicated that secondary education or higher score better regarding the knowledge part, 10.21 out of 14 vs. 8.4 out of 14 for less than secondary education (Al-Yousif et al., 2011; Amin, Hablas & Al Qader, 2011).

Furthermore, this study described the distribution of mothers according to their evaluation of the hospital awareness program. Around 86% representing the majority of the studied mothers indicated that the awareness program positively influenced their level of knowledge as well as their attitude, and intention to continue breastfeeding. Encouraging them to initiate breastfeeding as well as counseling them regarding the proper steps for feeding were the main items influencing the higher level of satisfaction. Recent reviews were done by Meedya S et al. (2010); and Hong Jiang et al. (2012); argued that breastfeeding intention was a good predictor for breastfeeding initiation and duration (Meedya, Fahy & Kable, 2010; Jiang et al., 2012).

5. Conclusion

The current study concluded that Hospital breastfeeding awareness program could represent a cornerstone for maternal and child health education and awareness. As breastfeeding habits diminish with the availabilities of alternatives, modernized and effective methods must be integrated into these programs and regularly followed up. Helping mothers to have a pleasant breastfeeding experience through the journey of motherhood can improve their compliance and thus the ability to reintegrate this habit into society again.

5.1 Limitation

This study is not without limitations, first of all, the studied population included a small sample from a single hospital integrated with the awareness program. This limited evaluation leaves a vast space for further studies to be implemented as this field of research remains to be lacking. Further studies may include multihospital assessment of breastfeeding awareness program. Several cities to be compared as social norm limiting breastfeeding vary from one region to the other. Second, follow up studies should be done taking into consideration the technological revolution allowing innovative methods for awareness to be implemented. Those methods can be integrated to enhance the quality of these awareness programs.

5.2 Recommendation

1. Breastfeeding awareness programs should be more integrated into society and not limited to the mother's hospital stay. Establishing breastfeeding clinics as part of the hospital awareness programs can improve maternal compliance as most of the mothers' address variable difficulties in breastfeeding after being discharged from the hospital.
2. More updated and technology friendly media could be used to give mothers education and counseling. Furthermore, the continuity to them support them and follow them outside the hospital boundaries is becoming a necessity.
3. Interactive classes and campaigns could be established as part of a breastfeeding awareness program to help raise the awareness in the society as well as becoming the initial step to help more mothers getting involved into the services of those awareness programs.

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Competing Interests Statement

The authors declare that there are no competing or potential conflicts of interest.

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