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## Communication Strategies for Strengthening Breastfeeding Promotion in Countries in Conflict

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### **Abstract:**

*Introduction: Countries of the Eastern Mediterranean region (EMR) are facing both political and economic challenges, which lead to health and nutritional problems. Breastfeeding promotion can alleviate malnutrition and support achievement of the Sustainable Development Goals (SDGs).*

*Objectives: To identify current status and future strategies for strengthening promotion of breastfeeding (BFP) in the EMR countries in conflict for achieving the SDGs.*

*Methods: A survey questionnaire for status of BFP was sent to focal nutrition coordinators in the 22 countries of which 14 countries responded. Data was compiled and underwent statistical analysis for types of communication messages, tools, populations targeted, management, monitoring and evaluation. Messages were divided into 3 groups: preventive (group I), supportive (group II) and protective messages (group III). The findings were correlated to exclusive breastfeeding (EBF), continued breastfeeding rates (CBF), mortality rates (MR) for children and maternal mortality rates (MMR).*

*Results: Preventive messages for BFP were more commonly used in campaigns. Supportive and protective messages were less commonly used. Communication tools relied mainly on printed and written matter [100%] versus audiovisual and e-media tools [53.57% and 51.43% respectively]. Messages targeted mothers rather than other influential groups. CBF for 12 months correlated highly with social media [ $r=0.77$ ] at  $P<0.001$ . CBF for 24 months correlated with messages targeting influential groups [ $r=0.81$ ] at  $P<0.001$ . Under-five MR correlated with audiovisual tools [ $r=0.44$ ] at  $P<0.05$ . A framework for evidence-based communication strategies for the region was conceptualized and formulated into messages that can assist in achieving the SDGs.*

*Conclusion: Government and support agencies need to invest in use of social media and audiovisuals aids and expand in use of supportive and protective messages for BFP, whilst supporting and protecting mothers through communication strategies targeting family members and policy makers.*

**Keywords:** Breastfeeding promotion, messages, e-media, social marketing, breastfeeding data

### **1. Introduction**

One of the main goals of Breastfeeding Promotion programs (BFP) is to achieve universal exclusive breastfeeding (EBF) for six months and continued breastfeeding for two years. Despite many global efforts, strategies and interventions, the achievement of such goals has been a real challenge. Evidence-based research can support the identification of effective communication strategies for promoting breastfeeding [i, ii, and iii].

National campaigns are effective when communication messages are taken to scale. Messages that target mothers' needs throughout their reproductive period were shown to be several times more effective than others that target single periods [iv]. Similarly, multi-faceted interventions in a combination of settings, i.e. health facility combined with community-based are more effective than interventions in one setting only [iv]. However there is scarcity of studies that examine types of scope of communication messages and channels that are most effective in changing behavior and improving breastfeeding rates. BFP is especially important for the countries of the Eastern Mediterranean region (EMR) of the World Health Organization (WHO) where political instability and complex emergency situations prevail.

The focus of this study is to assess needs for developing communication strategies and messages for promoting optimal breastfeeding practices in the EMR countries.

## 2. Methods

### 2.1. Study Design and Tool

This is a cross sectional study using a predesigned questionnaire that was tested locally and then forwarded to the focal nutrition points (FNP) in the 22 countries of EMR by email. FNP are officials appointed by the government to communicate with EMR-WHO. It included information about breastfeeding indicators, breastfeeding messages, tools, populations targeted, partners, and labeling information on Breast-Milk Substitutes (BMS). Under-five mortality rate [U5MR] and maternal mortality ratio [MMR] were obtained from WHO data banks. The indicators for breastfeeding were verified from the UNICEF multicenter indicators cluster surveys (MICS) and the WHO data bank.

Fourteen out of the 22 countries of the EMR [63.6%] responded in the allocated time of the study. They included: Afghanistan, Egypt, Iraq, Kuwait, Lebanon, Jordan, Morocco, Saudi Arabia, Sudan, Syria, Pakistan, Occupied Palestinian territory, Tunisia and the United Arab Emirates (UAE).

The tool was discussed with FNP during the Oman workshop on 30<sup>th</sup> October to 2 November, 2017, which allowed completion and clarification of data.

The messages reported by countries were divided as follows:

Group 1 included the following 10 messages: i- Benefits of breastfeeding to the baby and mother; ii-EB Fat birth[no prelacteals or supplements at birth] and thereafter for the first 6 months of life; iii- Timely initiation of breastfeeding (TIBF)through extended skin-to-skin (STS); iv-Techniques of breastfeeding; v- Continuing breastfeeding to12 and 24 months of age(CBF12, CBF24); vi-No artificial nipples or pacifiers; vii- Rooming-in and on-demand feeding (feeding cues); viii- Mother support groups; ix- Mother friendly practices and x- The Ten steps to successful breastfeeding.

Group II messages included the following 11 messages: i- Addressing misconceptions related to breastfeeding; ii- Not enough milk (increasing milk supply and relactation); iii- Fussy baby [managing a crying baby]; iv- Protocols for guiding practitioners in breastfeeding management; v- Managing breastfeeding in sick babies; vi- Low-birth-weight and babies with Jaundice; vii- Breastfeeding and family planning; viii- Management of breast conditions; ix- Sore nipple; ix- Medications with breastfeeding; x- Mothers who need special attention as twins, Cesarean-Section and primiparous mothers and finally xi- Breastfeeding support for the sick mothers [includes Diabetes Mellitus, pre-eclampsia, hypothyroidism, or other medical conditions including hepatitis B, hepatitis C infections and acquired immune deficiency disease.

Group III messages included the following 7 messages: i- Code awareness for legislators and policy makers; ii- Support for working breastfeeding mothers; iii- Hazards of inappropriate and unethical marketing of BMS; iv- Cost of suboptimal breastfeeding practices and economic benefits of breastfeeding; v- Global strategy of infant and young child feeding (GSIYCF); vi- Ending low cost and free supplies (including subsidies) and vii- Urging facilities to become Baby-friendly.

The data was compiled in excel sheets and presented as percent distribution, means and using Spearman rank correlation coefficient  $\rho$ . Countries were compared with regards to types of communication messages, tools, populations targeted, program management, monitoring and evaluation. We correlated scores for messages with rates of timely initiation of breastfeeding (TIBF) in the first half hour of birth, EBF for 6 months, and CBF12for CBF24 months and mortality rates (MR)of the 14 countries. Evidence-based communication strategies and supporting messages were developed based on the findings.

Ethical considerations included taking permission from country officials to collect and publish data. The data about the disseminated messages were reported by the national authority at country level.

## 3. Findings

The mean EBF for the first six months of life in the 14 countries under study in the EMR region was 29.1%. It was lowest in Tunisia [8.5%], Kuwait [10.6%], Egypt [13%], and Lebanon [14.8%]. It was highest in Afghanistan [64%] and Sudan [55.4%].

TIBF was 51.34%. Mean TIBF with STS was 63.6%, and was reported by 4 of the 14 countries only [28.5%]. The total number of hospitals designated as Baby-friendly, as reported by 11 out of the 14 countries [78.6%], was 401 hospitals. The mean percent births covered by the Baby-friendly hospital Initiative [BFHI]was 47.5%.

Messages that covered benefits of EBF were reported to be present by all countries [100%]. 92.9% reported that messages for promoting TIBF, rooming-in, CBF24were reported, 85.7% reported messages for promoting on-demand [cue-feeding] and14.3% reported messages that prohibit offering bottles and teats. BFP messages targeting misconceptions of "not enough milk" were high [92.9%]but low for mothers with medical problems [42.9%].

Advocacy messages were low for urging facilities to become designated as Baby-friendly [57.1%] and for ending free supplies [64.3%], GSIYCF and cost of suboptimal infant feeding [78.6%]. Code awareness, supporting working breastfeeding mothers, mother support groups and hazards of marketing were available in 85.7% of the surveyed countries.

The sources of BFP messages were mainly from the government supported by UN agencies in 85.7%, ministry of media and non-governmental organizations [NGOs] in 57.1% and academic institutions in 28.6% of the countries. The messages were reported to undergo prior testing by 57.1% of countries

The messages were divided into three groups as shown in figure [1].Mean percent score for the preventive messages [group I] including 10 messages was 90.7±26.9. Mean percent score for the lactation management related

messages [group II] including 11 messages was  $79.9 \pm 26.0$ . Mean percent score for the protection related messages [group III] including 9 messages was  $70.4 \pm 26.1$ . There was no significant difference between the groups at  $P > 0.05$ .

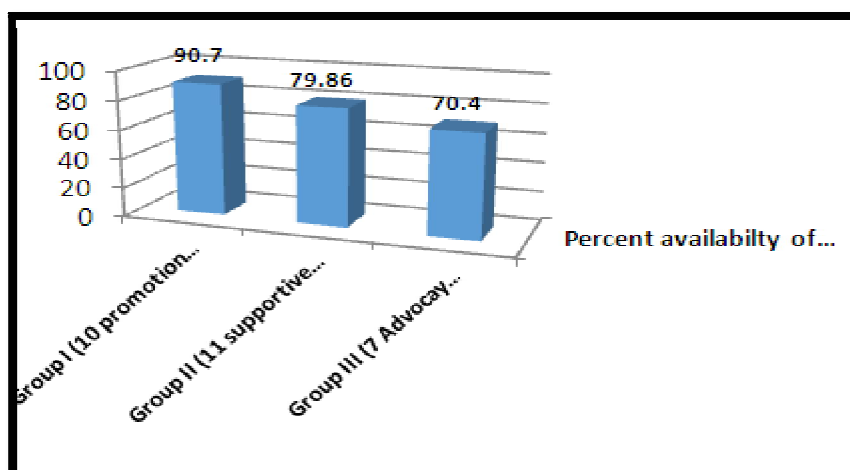


Figure 1: Comparison of Types of Messages Used in 14 EMR Countries

The channels for BFP of messages during national campaigns included printed matter [92.6%], press and social media [78.6%], billboards [50%], video clips and mobile application [42.8%], mobile messages and hotlines [28.6%], TV shows, soap operas and songs [14.3%]. Messages targeted mothers [100%] and health professional [92.8%], grandmother and policy makers [42.8%] and fathers [35.7%].

Table (1) shows that EBF and CBF for 12 months correlated with use of e-media for BFP [0.44 and  $r = 0.77$ ] at  $P < 0.05$  and  $P < 0.001$  respectively. TIBF correlated with use of printed matter [ $r = 0.48$ ]. U5MR and MMR correlated with use of audiovisuals [ $r = 0.44$  and  $r = 0.38$  respectively] at  $P < 0.05$  [Table 1].

Breastfeeding Indicators (Number of Countries)	Mean $\pm$ SD	Traditional Methods	Audiovisuals	E-Media	Groups Targeted
Timely first suckle (14)	51.3 $\pm$ 25.4	$r = 0.48^*$	$r = 0.30$	$r = 0.30$	$r = 0.11$
Exclusive Breastfeeding (14)	30.9 $\pm$ 15.9	$r = 0.19$	$r = 0.22$	$r = 0.405^*$	$r = 0.22$
Breastfeeding to 12 months (10)	60.2 $\pm$ 21.3	$r = 0.08$	$r = 0.02$	$r = 0.77^{**}$	$r = 0.40^*$
Breastfeeding to 24 months (9)	26.5 $\pm$ 18.6	$r = 0.226$	$r = -0.09$	$r = 0.44^*$	$r = 0.81^{**}$
Under-five mortality rate /1000 (14)	30.7 $\pm$ 28.3	$r = 0.15$	$r = 0.38^*$	0.07	$r = -0.02$
Maternal mortality ratio /100,000 (14)	97.07 $\pm$ 119.5	$r = -0.027$	$r = 0.44^*$	$r = 0.044$	$r = 0.16$

Table 1: Correlation of Channels for Breastfeeding Promotion and Target Populations with Breastfeeding Indicators and Mortality Rates in the 14 Countries

Populations targeted by messages included mothers, grandmothers, fathers and policy makers.  $\pm$ SD: standard deviation. P-value (level of significance):  $*P < 0.05$ ,  $**P < 0.001$ . Traditional methods include face to face and printed matter including brochures, flyers, leaflets, booklets, posters, newspapers and magazines. Audiovisuals include T.V. and radio, video clips, songs, puppet shows, cartoons, soap opera. E-media include social media, web sites, internet, mobile phones, hotlines, mobile applications

Figure (2) illustrates a conceptual framework for BFP communication strategies to guide country programs in strengthening BFP.

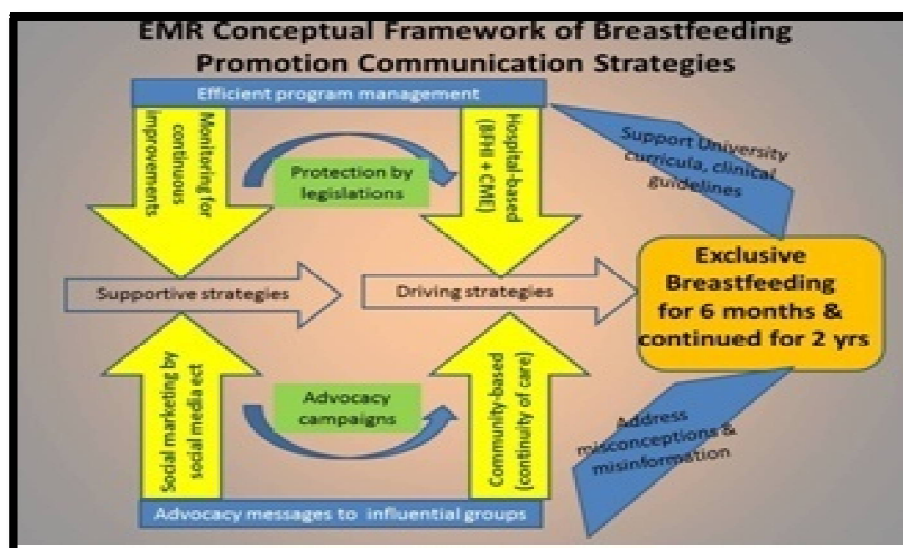


Figure 2: Strategic Conceptual Framework for Breastfeeding Promotion to Improve Exclusive Breastfeeding and Continuity Rates

Table 2 presents a summary of the evidence supporting strategies for promoting breastfeeding that can guide countries in the region and globally in BFP.

Major Findings	Evidence-Based Strategic Goals	Relevant Messages*
1. Low exclusive breastfeeding rates in the first 6 months of life and high bottle feeding rates with low CBF for 2 years and high MR.	- Promote, protect and support exclusive breastfeeding for the first six months of life and CBF for two years of age (v, vi, vii, viii).	Early initiation through STS, EBF for 6 months and continued breastfeeding to 2 years saves lives.
2. Messages for Baby-friendly practices are present but poorly disseminated and implemented.	- Promote the Ten steps of Baby-friendly to all pregnant women, mothers at delivery and health workers serving them or their babies (xiv-xvii).	Women should learn about breastfeeding early in pregnancy to demand Baby-friendly birth plans.
3. The channels for communication rely on traditional methods for dissemination; e-media is less commonly used.	- Use innovative means for communicating messages, increasing the variety, frequency and scope of dissemination to meet the varying needs of mothers and their influential groups (xxiii-xxiv).	Breastfeeding messages should be tailored to meet the changing needs of mothers and advances in communication.
4. Messages to mothers and medical protocols to professionals for managing lactation problems in mother and child are deficient.	- Integrate breastfeeding and lactation management in undergraduate and postgraduate curricula in universities and formal education, pre-service and in-service training (xviii).	Mothers with medical conditions should seek help from skilled professionals in lactation management to continue breastfeeding.
5. Communication and awareness campaigns were focused on mothers, and less commonly to health professionals, grandmothers, fathers, employers, influential community leaders and policy makers.	- Diversify breastfeeding promotion messages to meet the needs of various groups who can influence mother's decision to breastfeed (xxiv, xxv).	Family members and workplaces, when friendly, can support mothers to continue breastfeeding for two years.
6. Promotion of breastfeeding through MCH, IMCI and neonatal care is present, but not through EPI, FP, NCDs and pre-service training.	- Ensure consistency of breastfeeding promotion messages across health programs within the ministries to allow for scaling up with breastfeeding promotion messages (xxviii, xxix).	Coordinated efforts for Breastfeeding promotion can improve maternal and child health outcomes.
7. The formulation of breastfeeding messages seldom involved other sectors especially academia and NGOs.	- Work in partnership with other professional bodies, when formulating breastfeeding messages, to ensure consistency, unanimity and effectiveness xxii).	Partnerships strengthen inputs for breastfeeding promotion activities.

Major Findings	Evidence-Based Strategic Goals	Relevant Messages*
8. Indicators for Baby-friendly practices in health care facilities and follow-up support during breastfeeding are lacking.	- Establish registration and referral systems for Baby-friendly practices from antenatal, birth and postnatal care by encouraging lactation clinics/centers and referring mothers to them (iii, ix-xiii).	All mothers need continuous support during pregnancy, birth and throughout breastfeeding.
9. Sources of opposing messages are companies manufacturing and distributing products under the scope of the Code, the private sector, health professionals, supermarket and pharmacies.	-Establish breastfeeding watch campaigns for identifying correcting misconceptions and misinformation and train staff, media personnel and support groups in counseling and behavior change (xxxvi, xxxvii).	Counsel mothers and family members having misconceptions by listening, accepting, giving simple information and suggestions.
10. Information reaching the public through the labels of products under the scope of the code is in poor abundance to the Code and relevant subsequent resolutions.	-Identify and target gaps in information that should reach the public and the mothers about the hazards of products under the scope of the Code and marketing tactics used to promote them (xxvi, xxvii).	Parents and decision makers need to be informed of the negative effects of formula feeding on breastfeeding and health of baby.
11. The management component of communication and education in the BP program is not well equipped with staff and resources.	-Strengthen the managerial components of the program including the staffing, development of human resources, training, funding, coordination, information systems, monitoring and evaluation for program sustainability (iv, ii, xxiv).	Breastfeeding programs that are properly managed are an asset to the health care system.
12. Monitoring and evaluation systems for BFP were poorly developed and indicators were not consistent between countries, especially in relation to protection of breastfeeding.	-Strengthen monitoring and evaluation of BFP messages by developing consistent and unified input, process and output indicators for promotion, protection and support of breastfeeding that are continuously evaluated and updated (xxx-xxxiii).	Breastfeeding outcomes improve when inputs and practices are standardized, checked & improved.
13. Messages for advocacy issues are poorly disseminated in most countries and need to be strengthened.	-Enact and enforce laws for BFHI, the Code, the Global Strategy of infant and young child feeding and working breastfeeding women and monitor them (xix).	Investing in breastfeeding protection has invaluable economic returns.

*Table 2: Summary of Study Findings with Evidence-Based Strategic Goals and Relevant Messages for Strengthening Breastfeeding Promotion*

*\*Messages 1 to 5 are directed to Mother and Public, Messages 6 to 13 are to Decision-Makers*

#### 4. Discussion

There are intense efforts to communicate breastfeeding messages to mothers, yet other influential groups are less targeted by countries. However, the rapid growth of the communication technology as the internet and especially social media and mobile phone applications correlated highly with breastfeeding continuity rates in our study [r0.77]. However they are poorly used by national programs for promoting breastfeeding. This can be one of the underlying factors for impeding the national scaling up of the program.

The status quo or decline in breastfeeding promotion as shown by the low breastfeeding rates and slow rate of progress in Baby friendly hospital designation, allows the groups that oppose breastfeeding, mostly companies marketing breast-milk substitutes [BMS], to take the upper hand in communication and promotion of their products and messages. This has had a negative effect on the health and nutritional status of children in this region. Hence there is an urgency to develop communication strategies that are innovative and powerful and that can reach the diverse needs of mothers and other important sectors in the community. A comprehensive approach is required in order to face up to the challenges of disorganized program management and its negative effects on the efficacy of breastfeeding promotion messages.

A review of interventions around the world in breastfeeding promotion showed that effective communication interventions can improve breastfeeding practices when multifaceted and well-coordinated<sup>[1]</sup>. The authors identified around 200 interventions in their data base and concluded that promotion of exclusive breastfeeding by counselling or education of health workers and mothers, in a combination of settings, in both the health system and community, was the most powerful among the identified interventions, as it had the potential to raise breastfeeding rates up to 152%.

Communications strategies are important for protecting breastfeeding from the aggressive marketing and counter the ongoing misinformation and health claims propagated by industry. This is particularly important in EMR countries; as by 2018 there will be 7.3 million more 0-36 months old babies than 2013, while in other regions 0-36 months aged babies

will be decreasing, so industry is focusing its attention on this region[ii]. Moreover, EMR has the fastest annual compound growth rate in the world of internet users of 10.8% with an expected increase of 178 million new users over the next five years in this region [iii,iv].

The combination of several evidence-based strategies and interventions within a multi-faceted integrated strategy seems to have a synergistic effect [v]. Hence, there is an urgent need for revising and intensifying EMR efforts towards complementarity of strategic planning efforts for breastfeeding promotion and protection based and supported by updated local and global evidence.

Strategies for promoting EBF are supported by a study from 57 low and middle-income countries where EBF was independently associated with CU5-MR after adjusting for socio- demographic and health systems-related factors. A 10 percentage-points increase in EBF was associated with a reduction of 5 child deaths per 1,000 live births. A \$100 increase in per capita health care expenditure was associated with a decrease of 2 child deaths per 1,000 live births [vi]. A 1-month increase in EBF was associated with a 49% reduction in early infant mortality in the first 6 months of life [vii]. The risk of all-cause mortality was two-folds higher in non-breastfed children when compared to breastfed children aged 6–23 months [vii]. Both mothers and babies benefit from EBF for six months and CBF for two years [viii].

A number of evidence based studies have shown the effectiveness of support and promotion of breastfeeding over entire spectrum of child care [antenatal and postnatal] at both health care facility and community-based care [ix- xiii]. Implementing the Ten steps of Baby-friendly entirely has been shown to improve breastfeeding continuity outcomes [xiv- xvii] especially when supported with efficient education of staff caring for mothers and babies, [xviii] and backed up by political support [xix-xxi] and partnerships with effective stakeholders [xxi]. Strategies 2 to 6 were developed to meet these needs as shown in table [ii].

Strategies to promote breastfeeding should be developed to meet the growth of digital media and communication technologies, through internet and mobiles that is invading the future [xxi-xxvi]. A list of strategic objectives for BFP are presented that can be used separately or in combination to support and guide countries during their national campaigns as shown in table [ii].

In this study the of companies that produce BMS adhered poorly to requirements of information reaching the public through labels, which included images to suggest use in the less than 6 months were present in one third of the countries [28.6%] and that undermine breastfeeding [28.6%] of the EMR countries. Labels that promoted use of bottles above 6 months were reported present in 14.3% of countries of the region. Hence protection of breastfeeding should be core to all strategies, since without an effective protective strategy all our promotion and support would be in vain [xxvii]. This can be achieved by strengthening integration and coordination between health programs in the governments [xxviii, xxix]. Monitoring and evaluation assist to develop and improve program outputs and interpretation of research findings and community problems [xxx, xxxi]. A monitoring tool was developed for the BFHI and has been shown to be useful in assessing and improving practices [xxxii, xxxiii].

In conclusion, a comprehensive, multifaceted [v, xxx] approach to breastfeeding promotion is ideal for success of BFP communication strategies guided by updates in Baby-friendly [xxxvi], coordinating efforts[xxviii, xxix], working in partnerships[xxxii, xxxiii], identifying innovative tools for communication[xxii, xxiv] and protecting breastfeeding from marketing practices [xxiii, xxxvii, xxxviii, xxxix].

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