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Breastfeeding Promotion in the Eastern Mediterranean Region

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Volume (15) May, 2019
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Statement: The content of the articles does not represent World Health Organization position.
Theme: ***Breastfeeding promotion in the Eastern Mediterranean Region***

Issued by Mother Child Friendly Care Association, Alexandria ***(Registration no. 2538-2010)***

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Authorship. Authors should give their full names and the name and address of their institutions. **Tables and Figures** should be numbered consecutively (e.g. Table 1, Fig. 1) and should not exceed a total of 4. **Abstracts** should not exceed 250 words, in English at the beginning and is translated into Arabic, at the end of the article. **The body of the text** should be structured as Background, Methods, Findings and Discussion, typed in a double spaced word document (font 12 Times New Roman), not exceeding 12 pages (size A4). The journal does not accept any papers or work funded by infant milk formula companies or code violators. Ethical considerations for work on mothers and babies should be clearly described. **References** should not exceed 30. They should be in American Psychological Association (APA) style used for citing in social sciences articles. Then they are sorted alphabetically and numbered for reference in the text.

Correspondence information
Mother Child Friendly Care (MCFC) Association
18A, Saint Michael Ababeer, Stanly, Alexandria, Egypt.
Email: info@mcfcare.org
Official site: www.mcfcare.org
Journal publications; www.mcfcare.org/publication/

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We would like to extend our sincere gratitude to Dr. Ayoub Al-Jawaldeh, Head of the Nutrition Unit in Eastern Mediterranean regional office of the World Health Organization for his support and encouragement for making this issue possible.

The Nutrition unit has made many contributions both technical and tangible by providing the ideas and data that lead to the formulation of the background and substance of this special issue that is dedicated to improving the health and welfare of children and mothers in the countries of the region by promoting, supporting and protecting breastfeeding and adequate complementary feeding. However, the content of the articles do not represent World Health Organization position.

We would like to extend our gratitude and appreciation to the expert WHO consultants from the various countries EMR who have shared in the review of their country data and in updating and strengthening the reporting of information about their country. In particular, we would like to acknowledge the valuable inputs from: Dr. Hind Khalid Sabeeh from Iraq, Dr. Jalila EL Atti, Professor in Nutrition, National Nutrition Institute from Tunisia, Dr. Laila El Ammari from Morocco, Dr. Reema F. Tayyem, Professor of Nutrition, University of Jordan from Jordan and Dr. Noureen Aleem Nishtar, Nutrition Food Safety and Environmental Health Consultant, WHO Pakistan**.**

We would like to extend our appreciation to Ms Nashwa Nasr who has coordinated the networking between the different counterparts and made it possible to integrate their feedback in the reports.

Dr. Azza Abul-Fadl

Chief Editor

Editorial article:

Breastfeeding Support: A Liability for Survival in the Eastern Mediterranean Region

Breastfeeding promotion and support is a mandate for achieving optimum health and wellbeing for children and future generations in the Eastern Mediterranean region (EMR) where one half of the countries and two thirds of the population suffer or recovering from conflict. Despite all efforts by governments, world summit meetings and efforts of international organizations, breastfeeding remains challenged. Henceforth, countries are struggling to meet the recommendations for exclusive breastfeeding for the first six months of life and continued breastfeeding for two years. Despite the support from the Human rights commission and Convention of the rights of the child for mothers to breastfeed, violations to the International Code of Marketing of Breastmilk continue to prevail. The coming decade represents a real challenge for countries to meet the Sustainable Development Goals (SDG). Breastfeeding is **the** most cost effective and efficient intervention to achieve these goals.

The classic methods for promotion of breastfeeding need to be revisited with a new outlook given the emerging technologies, and their effect on networking and communication, within and between countries with no distinction with regards to gender, color, social class, religion, residence or age. Social media has become the most popular means of uniting people into one language and preferred means for education and communication for raising awareness and preventing misinformation that can cause disasters. Although communication has always been the fashion for each generation from the days the first telephone and telegraph communications were discovered, today, with the emergence and steep growth of internet and mobile systems, their potential seems inevitable to development, or chaos, if misused! This presents challenging opportunities for health promotion, but their speed of growth has not been met by an equal speed in the growth of the means and tools for health education and health promotion to meet the potential that these emerging technologies can provide.

This volume analyses the current situation of Breastfeeding in the region and goes in-depth through identifying and analyzing the current research findings at national level, using epidemiological surveys as references and utilizing the database banks for the World Health organization, World Bank and UNICEF surveys that rely mostly on the *Demographic Health Surveys* (DHS) and *Multiple Indicator Cluster Surveys* (MICS) that have added so much to our understanding of the needs of these countries. Our efforts to promote breastfeeding should not be discouraged by the aggressive marketing of the profit making companies that promote products for babies that interfere with the success of breastfeeding. Our aim should

be to promote a state of media literacy, whereby communities become aware of the underlying or masked messages that are veiled by the misleading information in the advertisements and ways of marketing these companies use to influence the decision of mothers and families in breastfeeding. On the other hand, deeply-seated misbeliefs and misconceptions, that are common in different cultures, can influence breastfeeding practices and represent a challenge for breastfeeding promotion. Finally, the medicalization of childbirth and infant feeding by technology-based-medicine, has turned our medical textbooks into references that guide our health professionals to the use of pharmacological agents and technology-based interventions that have the potential, in many cases, to interfere with optimal breastfeeding practices. In many cases, breastfeeding is marginalized, and treated a something that can be amputated from the life of women and babies and replaced by a technology based device of feeding as a bottle or formula milk or a pacifier. Unfortunately these procedures involve depriving the baby from the warmth and security of mother's body. Moreover separating babies, by placing them in incubators, away from their mother, prevent the growth and nurture of true human relationships. Such practices interfere with breastfeeding and thereby increase the immediate and long term risk of exposure of mothers and babies to disabilities and deaths from communicable and noncommunicable diseases.

In this volume we hope to highlight the status and progress in the Global Strategy of Infant & Young Child Feeding (IYCF) in the EMR and some neighbouring countries in the region that share a common language or religion, for comparative geographical purposes of analysis. We present research on how the current status has influenced malnutrition and child survival. On the other hand, it will be important to identify communication strategies for promoting breastfeeding and optimum IYCF.

Finally, it has to be mentioned that the EMR is a region that not only shares a common language but also a land that harbors the revelation of the Holy books and Holy Prophets. The unique strategic and spiritual characteristics of the EMR makes it a unique region that can lead the world into the havens of optimal motherhood and childhood care by promoting breastfeeding; especially that the Mothers of the Holy Prophets, who breastfed their babies, emerged and resided in the holy lands of this region. This should be viewed as a challenge and not an advantage and places our region in a bond of responsibility and obligation to promote, support and protect breastfeeding ostentatiously as expected by its spiritual disposition.

Chief Editor

Dr. Azza Abul-Fadl

Article I

A Snapshot of Infant Feeding Patterns in the Eastern Mediterranean Region

Ayoub Al-Jawaldeh and Azza Abul-Fadl

These indicators belong to a set of indicators whose purpose is to measure infant and young child feeding practices, policies and programmes. Infant and young child feeding practices directly affect the nutritional status and survival of children. Exclusive breastfeeding is the single most effective intervention to improve the survival of children. Improving infant and young child feeding practices is therefore critical to improved nutrition, health and development of children.

I.1. Exclusive Breastfeeding

Percent exclusive breastfeeding (EBF) less than 6 months is the proportion of infants 0–5 months of age who are fed exclusively with breastmilk.

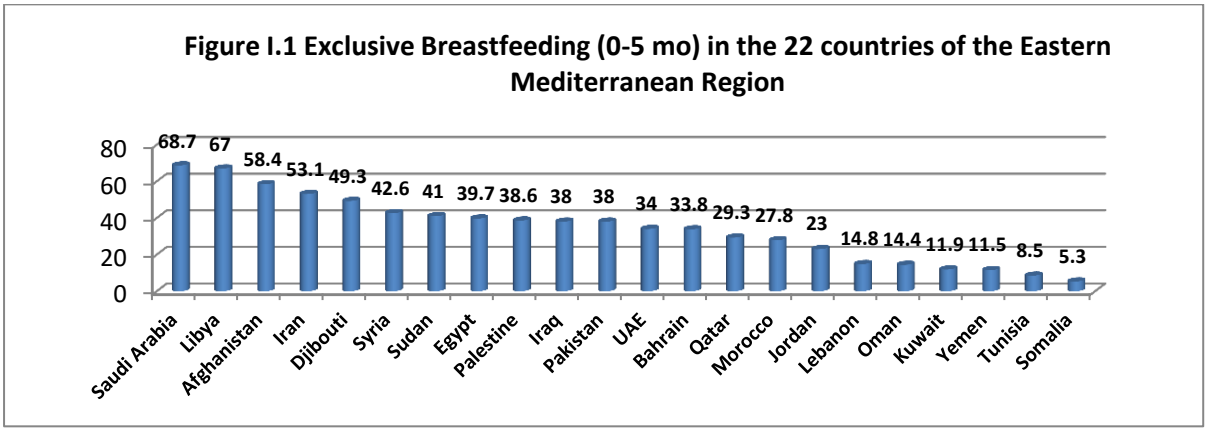


Figure (I.1) shows that EBF rates in the EMR countries by national surveys was highest in Afghanistan (58.4%) and lowest in Somalia (5.3%), Tunisia (8.5%), Yemen (11.5%) and Kuwait (11.9%). One third of the countries had EBF below 20%. Local surveys in Saudi Arabia and Libya gave high rates.

I.2. Early initiation of Breastfeeding

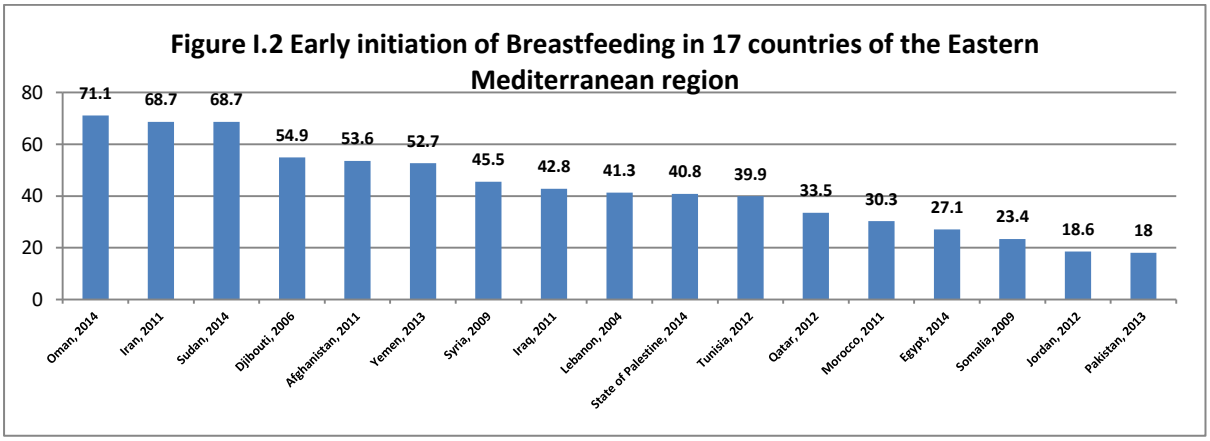


Figure (I.2) shows the initiation rates of breastfeeding within the first hour after birth in the EMR (UNICEF Health Global Database 2016). Initiation was highest in Oman (71.1%) and lowest in

Jordan (18.6%) and Pakistan (18%). Initiation rates remain challenged and there is no information on whether initiation is preceded by skin-to-skin contact.

I.3. Predominant Breastfeeding (PBF):

PBF is defined as intake of breastmilk with water based drinks (plain water, juice drinks, sugar water, ect.) other than formula milk in the first six months of life (0-5 months of age).

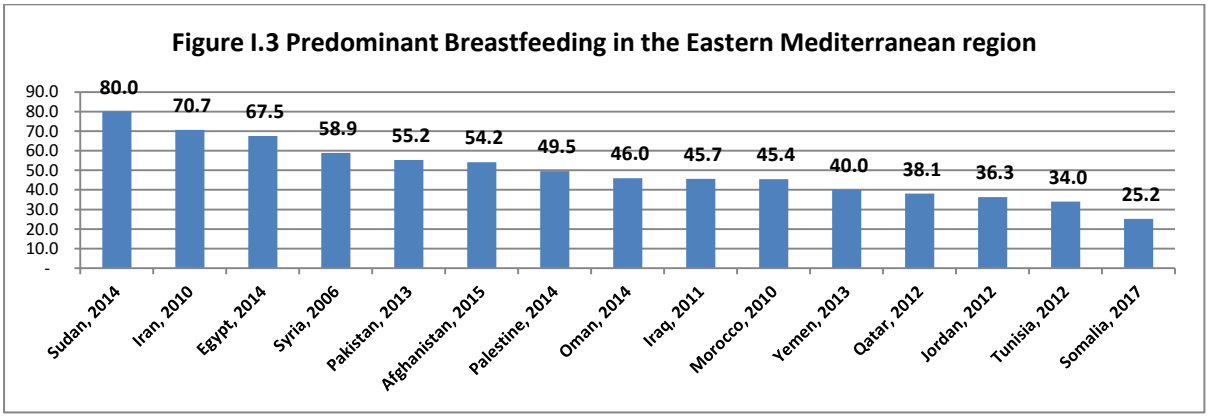


Figure (I.3) shows the predominant breastfeeding rates (PBF) in 14 EMR countries. It was highest in Sudan 80% and lowest in Tunisia (34.0%) and Somalia (25.2%) with a mean of 49.8±14.4.

I.4. Continued Breastfeeding (CBF):

Continued breastfeeding (CBF) at one year is the proportion of children 12-15 months of age who are fed breast milk. Continued breastfeeding at 2 years is the percentage of children fed breastmilk at 20-23 months of age.

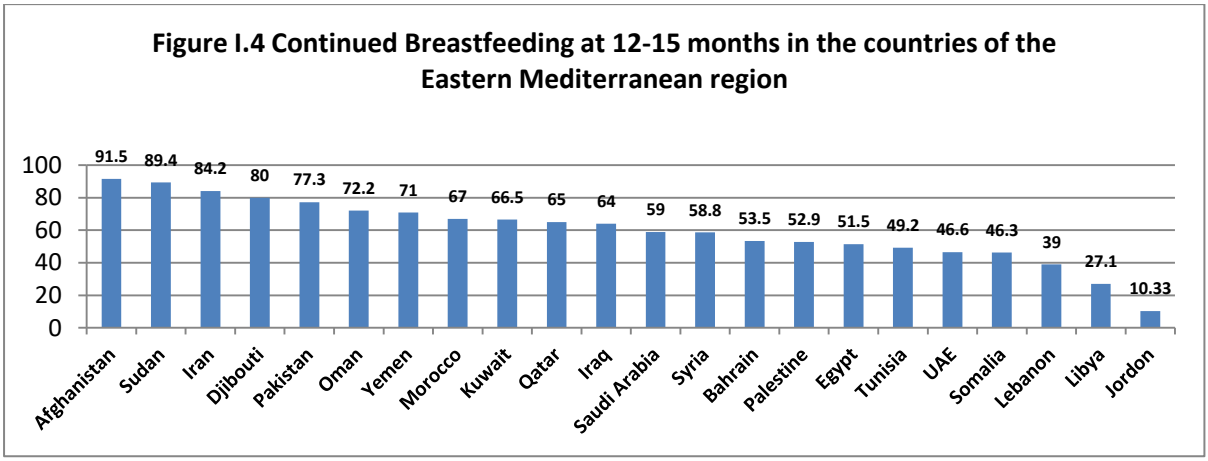


Figure (I. 4) shows that CBF at one year was highest in Afghanistan (91.5%), Sudan (89.4%), Iran (84.2%) and Djibouti (80%). One half of mothers continued breastfeeding for over one year in two thirds of the EMR countries.

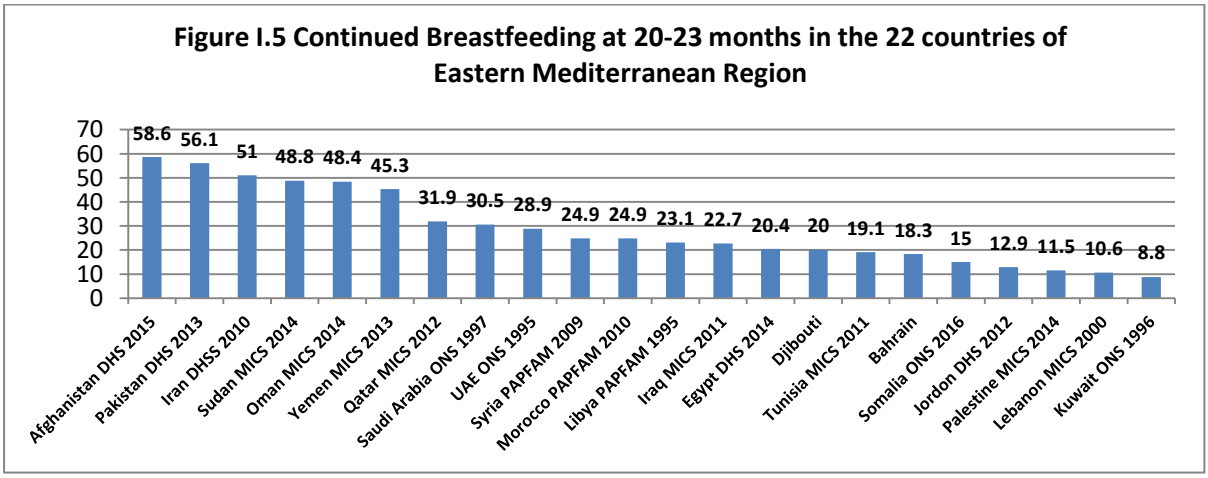


Figure (I.5) demonstrates that CBF (20-23 months) in the EMR countries was highest in Afghanistan (58.6%) and lowest in Lebanon (10.6%) and Kuwait (8.8%) with a mean of 29.4±14.9% for the region. This means that one third of the mothers in the region breastfeed to the end of the second year, i.e. 1 in 3 children, in a region were many of its countries are exposed to some form of conflict or chronic emergency.

I.5. Complementary Feeding

Introduction to solid, semi–solid or soft foods (ISSS) (6–8 months): Percentage of children receiving solid, semi-solid or soft foods **at** ages 6 to 8 months.

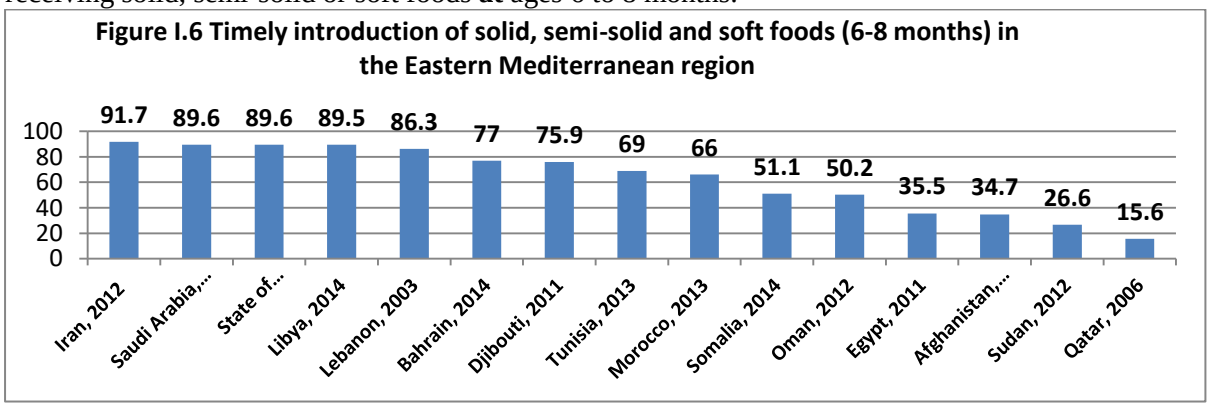


Figure (I.6) demonstrates that ISSS (6-8 months) was highest in Iran (91.7%) and lowest in Qatar (15.6%) and Sudan (26.6%).

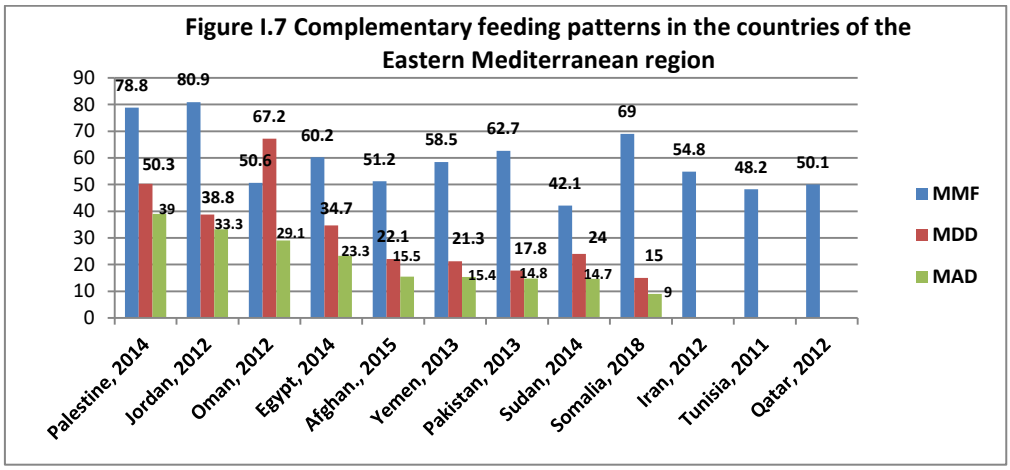
Minimum Dietary Diversity (MDD)

MDD is defined as the percent children 6─23 months of age (breastfed and non-breastfed) who received foods from ≥ 4 food groups during the previous day out of the total children 6-23 months of age.

Minimum Meal frequency (MMF)

MMF is the percent Breastfed and non-breastfed children 6─23 months of age who received solid, semi-solid and soft foods the minimum number of times or more (by age) during the previous day out of the total breastfed and non-breastfed children 6─23 months of age.

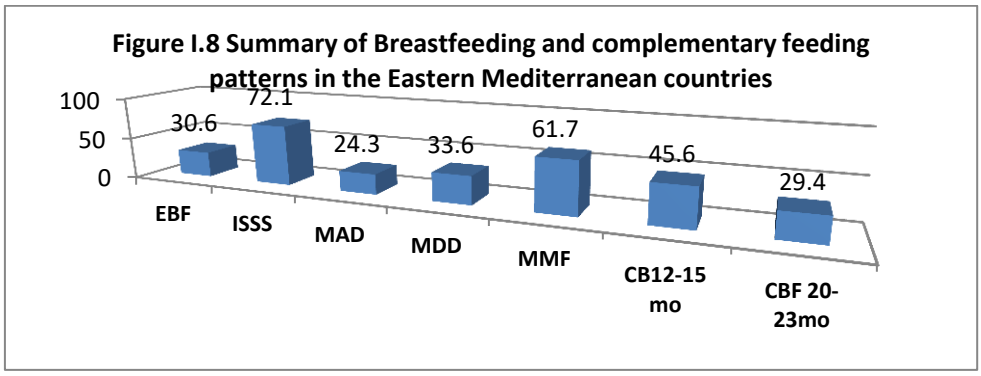
Minimum Acceptable Diet (MAD) is the proportion of breastfed and non-breastfed children 6-23 months of age who had at least the minimum dietary diversity and the minimum meal frequency during the previous day out of the total breastfed and non-breastfed children 6-23 months of age.



MAD: Minimum acceptable diet, MDD: Minimum diet diversity, MMF: Minimum meal frequency. (Afghan. i.e. Afghanistan). (Data available from UNICEF global data, 2018).

Figure (I.7) demonstrates the complementary feeding patterns for MMF, MDD and MAD in the EMR countries according to the most recent data available. MMF was high in most of the countries but the MDD was the main cause that contributed to the low MAD in all the countries presented except for Oman.

I.6. Summary



EBF: exclusive breastfeeding, ISSS: Introduction of solids, semi-solids, soft foods (6-8 months), MAD: Minimum acceptable diet, MDD: Minimum diet diversity, MMF: Minimum meal frequency, CBF: continued breastfeeding.

Figure I.8 summarizes the status of breastfeeding and complementary feeding indicators reflecting the patterns of infant feeding in the EMR. It highlights that EBF, MAD and CBF 20-23 months are the main challenges to optimum infant feeding practices in the EMR. These are counterbalanced by the ISSS, MMF and CBF to one year.

I.7 Conclusions

One third of the countries in the EMR had EBF below 20%. PBF is the prevailing infant feeding pattern with a mean of 49.8±14.4 in 15 countries. EIBF remains challenged and there is no information on whether initiation is preceded by skin-to-skin contact. One half of mothers continued breastfeeding for over one year in two thirds of the EMR countries. Only one third of the mothers breastfeed to the end of the second year. Complementary feeding is challenged by the low MDD in most countries.

المقال الأول: نبذه عن أنماط الرضاعة الطبيعية فى إقليم شرق المتوسط

الملخص و الاستنتاجات

تتعرض ثلث بلدان إقليم شرق المتوسط إلى انخفاض فى نسبة الرضاعة الخالصة (أو المطلقة) فى الستة أشهر الأولى من حياة الطفل بمعدل عشرين بالمائة أو أقل فى سبع من هذه البلدان ، وتعتبر الرضاعة الغالبة هى النمط السائد لتغذية الرضع فى هذه المنطقة والذى يمثل حوإلى خمسين فى المائة فى 15 من ال22 دولة بالمنطقة. ومن أكثر التحديات التى تواجه الرضاعة الطبيعية الناجحة هى التأخر فى بداية الرضاعة الطبيعية وبالأخص أنه لا توجد مؤشرات لقياس بداية الرضاعة من خلال وضع المولود ملامساً الجلد للجلد مع أمه لمدة ساعة إلى أن يبدأ الرضاعة. أما بالنسبة لاستمرار الرضاعة لعام وعامين فإن معظم البلاد تستمر بالرضاعة لمدة عام بنسب متباينة ولكن هناك تقصير شديد فى استمرار الرضاعة لنهاية السنة الثانية من حياة الطفل .

أما بالنسبة إلى التغذية التكميلية فإن معظم بلدان إقليم شرق المتوسط تدخل الأغذية التكميلية فى الوقت المناسب وبالحد الأدنى المقبول لتواترالوجبات ولكن هناك تحديات بالنسبة إلى تنوع الغذاء وهذا يسبب إنخفاض مؤثر فى مؤشر الحد الأدنى للنظام الغذائى المقبول للطفل دون سنتين من العمروذلك حسب المقاييس العالمية ، حيث أنه يصل إلى أقل من 20% فى خمس من تسع دول بالمنطقة وهذا يستدعي عمل دراسة وافية لأنماط تغذية الرضع فى هذا الإقليم لتحليل الوضع واكتشاف عناصر الضعف والقوة لوضع استراتيجيات لتصحيح وضع تغذية الرضع فى بلدان إقليم شرق المتوسط.

Article II

Status of Breastfeeding in North African Countries of the Eastern Mediterranean Region

Azza Abul-Fadl, Jalila El Atti, Ali Arabi, Leila El-Emmari, Ayoub Al-Jawaldeh

Overview

These countries include Djibouti, Egypt, Libya, Morocco, Sudan, Somalia and Tunisia. All these countries are also Arab states, and share cross-cutting cultural values by the common language "Arabic" and long history of Islamic influence. These North African countries are categorized by World Health Organization (WHO) as the Eastern Mediterranean region (EMR) and by the UNICEF as the Middle East and North Africa (MENA) region (except for Djibouti and Somalia). Algeria will be considered in section VI as a non EMR but MENA region country.

The countries are reviewed by their nutritional status and infant feeding status with a focus on breastfeeding and complementary feeding based on the latest global effort by UNICEF for re-analyzing the national surveys linked to Infant and Young Child Feeding (IYCF) data. Other advocacy issues linked to breastfeeding promotion and support included are the status and trends in the Baby-friendly Hospital Initiative (BFHI) and maternity support for the breastfeeding working mothers for each country.

II.1. DJIBOUTI

Background and health prophile

Djibouti is a small country that boards the south of this region and shares similar problems as its neighboring African states in which communicable diseases, poor sanitation, poverty and malnutrition take the upper hand. The five principal causes of morbidity in the population are respiratory infections, anemia, diarrhea, infectious diseases and foot conditions. For infants, the most frequent disorders of importance are pneumonias and diarrheal diseases, malaria, malnutrition and a diversity of neonatal morbidities. The principal causes of maternal

mortality in hospitals are hemorrhage and complications of eclampsia.

Literacy rates in Djibouti are the lowest in the region, at 67.9%, and are much lower in females (58.4%) than in males (78%). Utilization of contraception among married women aged 15 to 49 years of age is 17.8 %. The contraceptive pills are the most commonly used method (13.6 %), followed by injectable methods (2.5 %), and other methods. Female circumcision is very common, at 93.1%, with extreme forms of female genital mutilation representing 62.3%

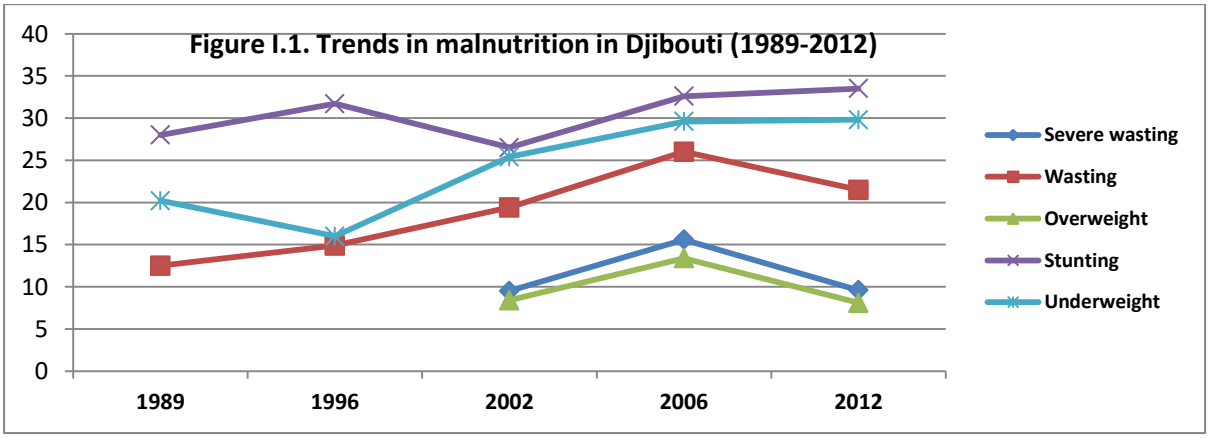
Djibouti age-standardized mortality rate is a mixture of both communicable and non-communicable disease with Tuberculosis as the leading cause of death (118.6/100,000), followed by pneumonia (118.3/100,000), HIV AIDs (101.3/100,000) and diarrhea (52.6). Deaths from non-communicable diseases are also in the lead as stroke leads (118.4/100,000) followed by coronary heart disease (75.5/100,000) and diabetes mellitus (40.5/100,000), breast cancer (20.7/100,000) and hypertension (16.8/100,000). Death from malnutrition is the sixth most common cause of death (41.7/100,000) (WHO, 2015).

Under-five age mortality is 94 per 1000 live births and infant mortality is 67 per 1000 live births. Infant mortality is much higher in males (103) vs. females (81) per 1000 live birth and is much higher in urban (95) vs., rural (73) per 1000 live births.

These drastic health indices are associated with poor infant feeding practices that lead to the malnutrition and communicable diseases leading to the high mortality rates. On the long term poor early infant feeding practices lead to death from noncommunicable diseases.

Trends and status of IYC nutritional status

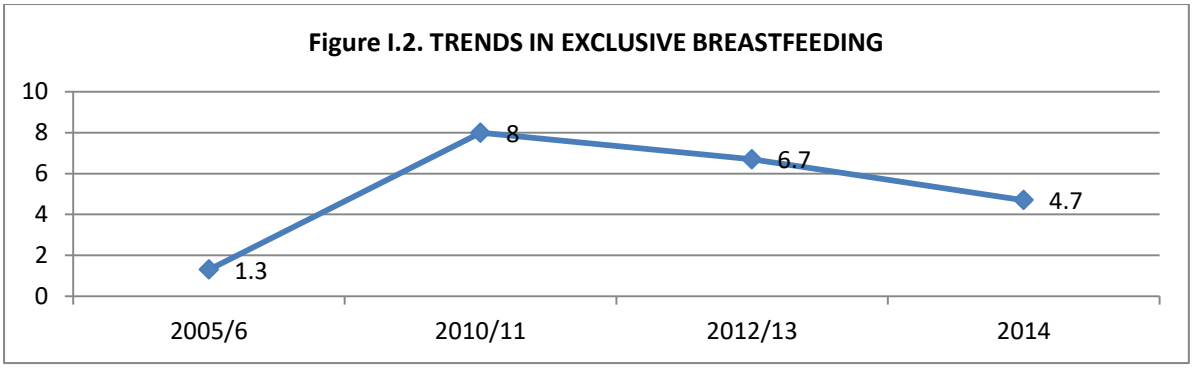
Prevalence of underweight has increased from 16% in 1996 to 29.8% in 2012 national surveys. Stunting has also increased from 26.5% in 2002 to 33.5% in 2012. Severe wasting has decreased from 15.9 in 2006 to 9.1% in 2012 and wasting has decreased from 26 in 2006 to 21.6 in 2012. Low birth weight is 10.2%.Overweight is 8.1% (2012). Trends in malnutrition are shown in the figure below:



Trends and status of IYCF: Exclusive breastfeeding (EBF) and complementary feeding

EBF has decreased by one half from 8% in 2011 to 4.7% in 2014. Continuation of breastfeeding up to 12-15 months is 53.5% and for 20-23 months is 18.3%. (***EDIM, 2013***)

Complementary feeding: introduction of solid, semi-solid and soft foods (ISSS) at 6-8 months is 23.1%. It is higher in males (25.6% compared to females (20.1%) and in urban (24% vs. rural (11.7%) (***EDIM, 2013***).



Baby-friendly hospital Practices

Trends in early initiation of breastfeeding

Early initiation of breastfeeding (EIBF) is 52%. EIBF is higher in rural areas (64.6%) than in urban (47.8%), (EDIM, 2013). EIBF is higher in the illiterate mothers (53.7%) than in mothers with primary education (49.8%). No data are reported for a mother with secondary of higher education as literacy rate among females is low (58%) and educational attainment of secondary education is minimal.

The percent reported births in designated hospitals and maternities (2016) are 1.2% (***Nutridash, 2014 from WHO, 2017***).

Baby-friendly Hospital implementation by country:

Djibouti did not report any progress with regards the designation process of implementation of BFHI (***WHO-GNPR2 survey, 2017***).

Maternity support of the working breastfeeding mothers

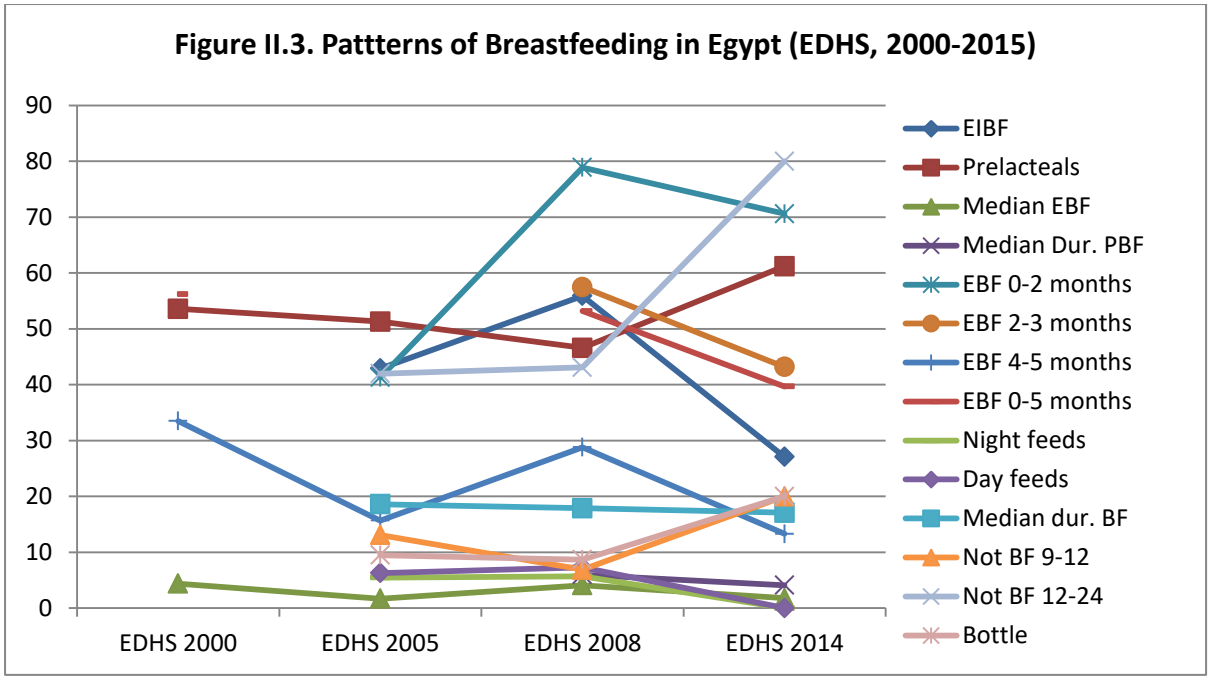
Female employees are entitled to 14 weeks of paid maternity leave, 8 weeks before birth and 6 weeks after. Fathers are entitled to 3 days of paid paternity leave. A working mother is entitled to one hour per working day to breastfeed her baby during the first 12 months following her maternity leave, which can be taken at the beginning or end of the working day. During this period, the mother can leave her work without notice and without having to pay any compensation to the employer. This temporary absence does not give reason to a salary deduction. Labour Code, art. 116.

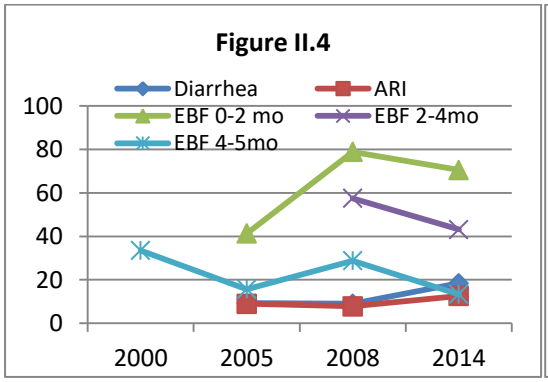
II.2. EGYPT

Trends and status of IYCF:

Exclusive breastfeeding (EBF) and complementary feeding

Figure II.3 to II.6 present the trends and current situation in infant feeding practices, and morbidities from diarrhea and acute respiratory tract infections.





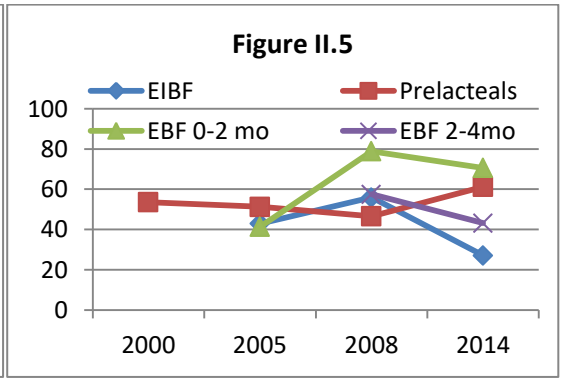
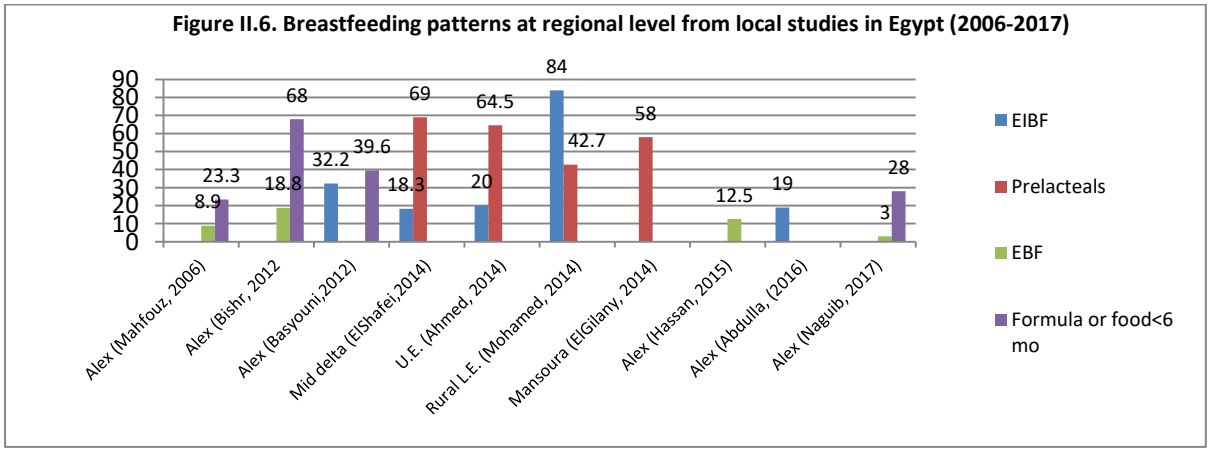


Figure (II.4) Trends in exclusive breastfeeding practices and their relation to rising trends in morbidity from diarrhea and acute respiratory tract infections over the past 15 years from the Egyptian demographic health surveys (2000-2014). Figure (II.5) The relationship between delayed first breastfeed and prelacteals and the effects on breastfeeding continuity at 2 and 4 months



Source: MCFC Egyptian Journal of Breastfeeding, volume 14, 2018. (***EBF: exclusive breastfeeding, BF: breastfeeding, EIBF: early initiation of breastfeeding within first hour after birth, LE: Lower Egypt, UE: Upper Egypt.***

Patterns of infant feeding in Egypt

A number of recent studies have indicated very low rates of EBF particularly in urban populations despite the intensive efforts of the Ministry of Health to promote EBF.

One study showed that EBF was 12.5% among 400 lactating mothers with infants aged from 2-6 months in Family Health Unit. The knowledge, and practice towards exclusive breastfeeding (EBF) was low 10.22±2.9 & ranged from 4 to 22 out of 27 knowledge questions. It was higher in mothers, with higher education, working mothers and those who received knowledge from media or combined sources. The significant predictors for EBF were; male sex, early breastfeeding initiation after delivery, and good knowledge with odds ratios of 3.02, 13.2 and 7.9 respectively **(*Hassan et al., 2015*)**.

Another study in a clinic in Alexandria of whom 4.4% of the studied cases or 8.9% of infants aged 0-6 months were EBF, 72.4% received both breast and others (MF) while the rest 23.3% received artificial formula feeds (AF). The main causes that led to failure of mothers to breastfeed were due to maternal causes in 45.7% including complicated deliveries, breast and nipple difficulties and insufficient breast milk. While 39.7% were due to infant causes including prematurity, infant refusal, infant illness and excessive crying. Growth of EBF babies was superior. The mean percentiles for weight-for-age, length-for-age, head circumference-for-age, mid-arm circumference-for-age of EBF, MF were higher when compared with AF babies. Lower respiratory infections, acute gastroenteritis and otitis were less common among EBF babies compared to mixed and artificially fed babies (***Mahfouz, 2006***).

A study of 300 mothers with infants aged less than 12 months, recruited from 8 primary health care centers in Alexandria, showed that EBF was only 3%. Less than two thirds (62%) were on artificial formula feeds (AF). PBF was (28%). By the age of two months, the EBF decreased to (11%). At three and four months, the rates were (10% and 7%) respectively. Another drop occurred to reach (4%) at the age of five months. Despite the low EBF, 74% of the mothers continued breastfeeding up to one year. Weaning was sudden in 26.9% (***Naguib, 2017*).**

Another cross sectional survey of a total of 300 preschool children from Sidi-Beshr Bahary family health unit in Alexandria showed that EBF was 7%, while 33.67% were fully formula fed (***Emtair, 2016***).

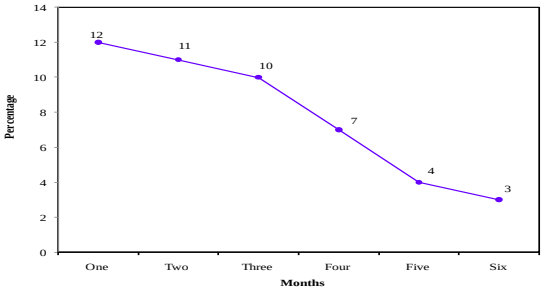


Figure (II. 7) Exclusive breastfeeding.

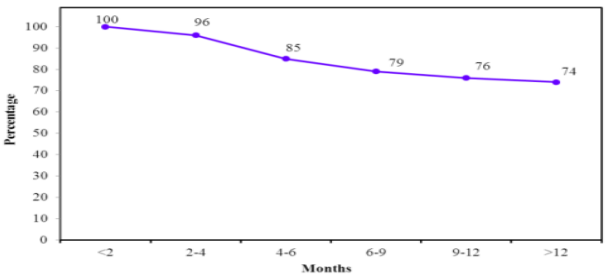


Figure (II.8) Duration of breastfeeding.

The patterns of EBF were different than other forms of feeding as follows:

In a study of 187 mother-infants pairs in two family health units namely, El Wastanya at Kafr Eldawar and Semouha at Alexandria, the

frequency of breastfeeding per day ranged from 3-12 times with a mean of 6.7±2.4. The highest was among those who fed their infants no other supplements (7.7±2.2), followed by mothers who were giving herbal drinks (6.8±2.3) and shortest in those who fed other milks with breastfeeding (4.2±1.6 hours) (P=0.005). The duration of the feed among all mothers ranged between 5-20 minutes with a mean of 9.5±3.3 min in the PBF mothers, while EBF mothers had the longest mean duration of a breastfeed (10.9±2.8 minutes) (P=0.028). None of the mothers expressed their milk. Half of studied mothers used feeding bottles for fluids only and the other half to feed their infants with fluids and/or milk formula. More than half of all mothers (54.1%) use bottles by advice from a health care provider (more in urban than rural P<0.01). The mean duration of breastfeeding was 16.9±4.4 months ranging from 16.0±4.7 months in EBF, 18.2±3.2 months in PBF. No differences were found in-between urban and rural mothers **(*Basyoni, 2012*)**.

Another study by ***Emtair in 2016*** showed that one half of the population under study initiated breastfeeding within one half hour of delivery. Causes of cessation of breastfeeding was scanty milk (57.67%), desire for weaning 22.33%, child refusal 7.6%, sick baby 1%, maternal disease 0.1%, new pregnancy 2%. A significant 13.3% were underweight (-2 to -3 Z-score) and 12.2% were overweight (>2 Z-score) highest at 12-24 months, 19.3% and 14.3% were moderately stunted and wasted respectively. Obesity using BMI centiles >97th centile was 13.7%. While 43.7% introduced formula milk, 8.3% at age <6 months, 6.7% at 6 months, 15.33% at 6-12 months and 17.33% at age >12 to <18 months.

Upper Egypt infant feeding practices

Fahmi et al (2014) studied feeding practices of infants in Menia governorate. The study was done for a representative sample of 379 infants of Menia governorate. They were attending two randomly selected health centers. Overall ever breastfeeding rate was 93.6%; only 6.4% of infants had never been breastfed mostly due to refusal of infant to breastfeed (45.8%) or breast problem (29.2%). EIBF in the first hour was 18.3%. Delayed initiation, after the first hour but within the first 24 hours of birth was 37.5% and within the following days (44.2%).

Prelacteals and supplements in the first 3 days were offered to 245 infants (69%). Only 31% were exclusively breast milk fed in the first three days of life. The type of feeds given varied from glucose (39.2%), herbal drinks (35.5%), sweetened water (14.3%), milk (7.8%), gripe water (1.6%) water (0.8%). They were advised mostly by friends.

Bottle feeding rate (formula milk feeding) among the 379 infants was 10.6%, mostly in addition to breastfeeding.

EBF before 4 months of age was 4.3%, while at 4-6 months it was 65.3% (24 hour recall). Timely complementary feeding at 6 months was 69.6% (24 hour recall). Mother's knowledge about the benefits of breastfeeding came from her own mother. However, 40% did not know the benefits of breastfeeding for her and for the baby. Only 0.5% listed 4 benefits of breastfeeding and 12.3% were able to describe what was meant by EBF.

Reasons for discontinuation of breastfeeding

The most common causes for early discontinuation of breastfeeding are milk insufficiency (34%), and refusal to feed (17.5%) (***Naguib, 2017*****)**.

A study was conducted in Cairo university hospitals to identify the causes of failed breastfeeding in a random sample of 3500 women, over the period between July 2007 and July 2011 **(*Hegazy et al., 2015*)**. At one month postpartum, only 78% [n=2502] of the mothers who had initiated breastfeeding [n=3210] were still breastfeeding their babies. Only 45% of those continuing to breastfeed [n=1126] were EBF. The following reasons were given for early cessation of breastfeeding: concerns about baby's weight gain/ loss [n=361; 51%], baby not latching to the breast and preferring bottle feeding [n= 226; 32%], painful breastfeeding [n=64; 9%] preparing to return back to work [n=40; 5.6%], fear from obesity [n=7; 0.9%] and fear from breast disfigurement [n=3; 0.4%]. Seven women (0.9%) lost their babies. Cox regression analysis identified three risk factors for failed breastfeeding First, younger maternal age; Second: Higher rate of employment p=0.03. Third: Low birth weight of the baby p=0.04. Non-significant differences included; mode of delivery, parity, socioeconomic status, educational level, separation from the baby at the time of delivery and sex of the baby.

Complementary Feeding (CF) practices

National studies in Egypt (EDHS, 2015) reported that the ISSS at 6-8 months was 75.2%. They also reported the following about other CF indices:

The minimum acceptable diet (MAD) was 23.3% (range= 23.3 to 24.8 for a sample size of 4,744). It was similar in both males and females (23.5 and 23.1 respectively). No differences were shown between urban and rural communities (23.4% and respectively).The lowest MAD was in the second half of the first year (17.1%) increasing into the beginning of the second year to 28.2% and reaching a maximum of 31.5% at age (16 – 19 months) but declining again at 20-23 months to 21.6%. It was highest in families from lowest and highest wealth quintiles (WQ1 and WQ5) (25% and 25.8%) and lowest in WQ2 (21.3%). Children of mothers who highly educated had the highest MAD scores (24%) compared to mothers who were illiterate or had primary education (22.5%) and mothers who had secondary education (20.1%).

The minimum meal frequency (MMF) was 60.2%. MMF was higher in males (61.2%) than females (55.2%) and in urban (64.3%) than in rural (58.4%). MMF was lowest between 6 to 11 months (56.6%) and increased to a peak of (64.8%) at 16 to 19 months but declines thereafter (63.4%). It was highest in WQ5 (70.8%) and lowest in WQ2 (54.7%). It was highest in the highly educated (67.8%) and lowest in those whose mothers had primary education (52.2%) or no education (54.3%).

The minimum dietary diversity (MDD) was 34.7%. It was higher in females (34.9%) than males (34.5%) and in rural (35.2%) than in urban (34.9%). MDD was lowest between 6 to 11 months (19.9%) and increased to a peak of (48.1%) at 16 to 19 months but declined thereafter (45.2%). It was highest in WQ1 (37.2%) and lowest in WQ2 (32.1%). It was highest in the highly educated (39.4%) and lowest in those whose mothers had primary education or no education (33.6%).

A local study in Alexandria showed that more than two thirds (68.0%) of studied mothers initiated weaning before six months. Initiation of weaning at 4 months was 58.8% and at 5 months of age was 23.6%. Grains (88.2%), dairy products (78.4%) and vegetables (72.6%) were the most commonly used weaning foods. Causes of early weaning were perceived milk insufficiency (7.8%), work 8(7.8%), baby related causes (hungry 33.3%, milk refusal (3.9%), twins (3.9%). Working

mothers who were breastfeeding were 27%, while 73% of working mothers were not breastfeeding **(*Bishr, 2013*).**

The above study explains the low MAD in Egypt being mainly attributed to the low MDD, since MAD is a combination of MMF and MDD. Hence educational messages for improving CF should focus on encouraging mothers to feed their infants a variety of foods that are high in nutritious components as fresh fruits and vegetables rather than readymade marketed baby foods that many poorly educated urban mothers resort to giving as a substitute to home prepared foods.

A local study in Egypt reported that age of introduction of food and fluids in the studied infants ranged between one and half to nine months with a mean of 4.9±1.6 months. Mothers who EBF and PBF started introduction of foods to their infants at an appropriate age of 6.4±0.8 and 6.7±0.7 months, respectively compared to those who were formula feeding (AF), who introduced foods at an early age (3.8±0.3 months) at (P<0.0001), thus exposing their babies to the hazards of early food intake. About two fifths of studied mothers (39.6%) used feeding bottles for their infants. Bottles were used by 50% of mothers who AF their infants compared to one third of mothers who PBF, while the least frequency reported was among mothers who EBF (10.7%) (P<0.0001). This indicates that EBF assists the child to develop feeding skills for chewing and acceptance of solids and semi-solids more than artificially fed, who continue to rely more on bottle-feeding rather than feeding by spoon or cup **(*Basyoni, 2012*)**

Another study, conducted in two primary health care units in Kafr El-Sheikh governorate, examined the weaning practices among mothers/caregivers of infants aged 6 months. The study included 292 infants aged 6 months in two primary health care units (health office Motobis Family health unit of Ibiana) in Kafr El-Sheikh governorate. Two thirds of the mothers started weaning their infants before the age of six months. EBF was 32.2%. The working mothers in both groups were the same (17.7% vs. 19.1% P>0.05). Weaning at 2-4 months was (43.4%), one third (35.9%) at <2 months and 20.7% at 4-6 months. More than one third of the mothers 68 (34.4%) started early weaning because of infant crying after breastfeeding. Less than one third of the mothers 64 (32.3%) started early weaning because the baby demanded more frequent milk feeds (32.3%), was hungry after a short periods of sleep through the night or mother had a medical condition (0.7%). More than one fifth of the mothers (21.2%) started early weaning because they returned to work after maternity leave. On the other hand, a minority of mothers started weaning because the growth of the baby was inappropriate for age (5.6%) or because they had a medical condition (0.7%). More than two fifths (46%) of weaned infants had problems just after introducing weaning foods. Mothers who did not wean before 6 months reported that it was because it was a family habit (79.8%) or because baby refused (20.2%) (***ElShanat, 2013*).**

A cross-sectional study that was carried out over a period of four months for 1000 eligible women having infants aged less than two years through a multi-stage random sampling method. All the included mothers had breastfed their infants. EIBF was 32.4% and EBF was 29.9%. Food was introduced at 6-9 months of age in 63.6%. Bivariate analysis showed that factors favoring EBF were age of the mother (<25 years), secondary or higher education, mothers who received health education about EBF or had knowledge about EBF. The study showed that knowledge and practice of EBF increased efficient CF

practices especially among new and young mothers **(*El Shafei et al., 2014*)**.

The age of ISSS is very important. A study in Egypt showed that foods introduced at age of 3 months was associated with underweight or obesity (25% and 75% respectively). Late introduction of food was accompanied with lower percentage of obesity in children (37.2%). These relations were statistically significant where (P=0.000). No significant relationship was observed between age of child at termination of breastfeeding, pattern of weaning and nutritional status of preschool children. During weaning, 37.5% of children who were not introduced to milk were obese. On the other hand 23.8% of those introduced to milk were underweight (P=0.000). A significantly higher percentage of daily consumption of canned juice (14.3%) fell in the obese category (P<0.002) (***Emtair, 2016*).**

On the other hand, another study showed that introduction of solid foods to infants before six months of age was practiced in 71% of mothers. Just less than one fourth (24%) were introduced complementary foods at the age of six month. While only 5% of the studied mothers introduced solid foods to their infants late (after the six months of age). No differences in weight, length and head circumference percentiles for growth and development were noted by mode of feeding. Two thirds (66.7%) of EBF mothers were highly educated, while the other one third (33.3%) had middle education (P<0.029). All (100%) of EBF mothers were not working. Two thirds of fathers of EBF were highly educated (66.7%) and (33.3%) had middle education **(*Naguib et al., 2017*)**.

Patterns of morbidity associated with mode of feeding

A study of 150 infants below 6 months of age was carried out in one family health unit namely; Derbala at Alexandria governorate. They reported that although most of the studied infants (78.7%) received colostrum, yet many were either obese or underweight and most were not EBF, while the EBF children were protected against underweight. About two thirds of mothers (65.4%) started breastfeeding immediately after birth. Delayed initiation of breastfeeding was (29.3%), and was due to incubator care (36.3%), cesarean section (27.3%) and prematurity (18.2%). Only 18.8% were EBF, whereby 69.6% were over-nourished, 23.2% were under-nourished and only 7.2% had optimal growth. None of infants who were EBF were underweight compared to 23.2% of those fed by other feeding modalities. Additionally, 52.2% of the studied infants were overweight and fed on the other feeding types compared to 17.4% who were EBF (P=0.007). Moreover only 5.3% of infants who were EBF suffered from ARI compared to 8.7% of those on other feeding types. Additionally, 6.7% of EBF were sick compared to 13.3% of infants who fed on the other feeding modalities (P=0.006). ***The study again highlights the importance of EBF on the health and nutritional status of children*** **(Bishr, 2013).**

Abdulla (2016) studied health status and breastfeeding patterns of 100 infants below 6 months of age, attending for child welfare during the first week of life. They were followed up at 2 and 4 and 6 month of age for health status and breastfeeding patterns. The mean age was 28.4±5.3, 65% were university education, 89% married, 11% divorced or widows. EIBF was 19%. On-demand feeding was 68% and 53% were offered prelacteals. They also found that at 2 and 4 months respiratory distress, diarrhea and fever were significantly higher in non-exclusively breastfed than the exclusively breastfeeding infants. No differences were seen in growth in weight and length at 2 and 4 months. Introduction of formula was mainly by prescription from doctors in 79.1 to 100%.

Breast problems were encountered in 4.5% and 20.9% over the period of follow-up (2 to 4 months of age). Reasons for not exclusively breastfeeding were insufficient milk in 50% to 68.3%, inadequate growth in 13.3% and 35.8%, thirst in 4.5 and 23.9%, mother in law advice in 36.4 and 86.7% and medications in 6.7% and 19.4% at 2 and 4 months respectively.

Mohamed et al., (2014) described the knowledge, attitude, and actual practices of mothers in a rural area in Upper Egypt regarding breastfeeding, complementary feeding and weaning and effect of education and age. The community-based cross-sectional study was done for 307 rural mothers with a child aged 2 years or less. Mothers were selected using systematic random sampling. They reported that 84% initiated breastfeeding immediately after delivery, and 42.7% of the studied mothers offered prelacteal feeds to baby before lactation. About three quarters (74.2%) of mothers fed colostrum. EBF was associated with mother's education ($P < 0.0001$) but not with mother's age, mother's occupation, or place of birth. All the studied mothers knew that breastfeeding is the best source of nutrition for the baby. The majority of the mothers had good knowledge about the advantages of breastfeeding for child. As regards weaning, majority (92.5%) of the mothers defined weaning as breastfeeding cessation. Most of the mothers (94.8%) agreed that breastfeeding protect the child from infection, 96.1% agreed that it is the healthiest for infants, 76.5% agreed that breast milk lead to loss of figure, and 83.4% agreed that breastfeeding should be avoided during mother's illness. The authors concluded that improving EBF requires a multifaceted approach through health care system interventions, family interventions, and public health education campaigns to promote optimal breastfeeding practices, especially in less educated women.

Table (II.1.) Health status of exclusively versus non- exclusively breastfed in the first 6 months of life:

Age	Diarrhea		Fever		Tachypnea	
	Excl. %	Non excl. %	Excl. %	Non excl. %	Excl. %	Non excl. %
1st week	4.7	20	5.9	13.3	14.1	20
2nd months	11.5	36.4	10.3	36.4	15.4	45.5
4th month	20.3	43.9	18.6	34.1	8.5	43.9
6th month	3.0	26.9	3	22.4	12.1	5.7

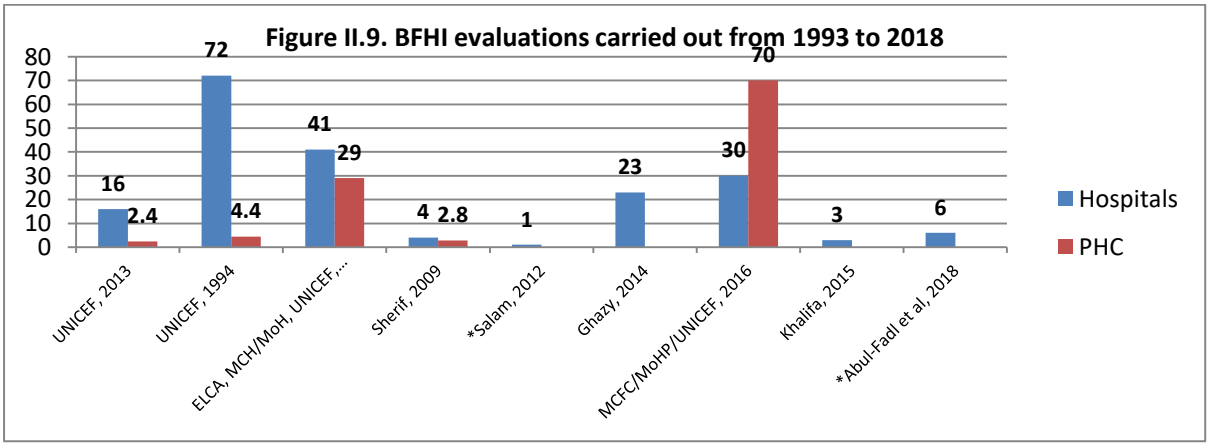
Clemens et al., (1999) in a prospective birth cohort of 198 infants for the first 6 months of life studied the risk of diarrhea measured through twice-weekly home visits. EIBF and types of foods at follow-up were independently predictive of the rate of diarrhea. EIBF was also associated with a longer duration of EBF. There was no relation between early initiation and risk of diarrhea in the second 6 months of life. The authors recognized that EIBF is likely to be associated with a longer duration of EBF, which is also predictive of reduced risk of diarrhea.

The impact of breastfeeding on the growth, morbidity and mortality patterns among low birth weight infants (LBW) was studied by ***Sayed (2000).*** They studied 200 mothers who were followed up at 3 and 6 months. Formula feeding (FF) was 28% at 3 months and 36.6% at 6 months. The main cause for FF was poor weight gain. Morbidity from acute upper respiratory tract infection (AU-RTI), acute lower respiratory tract infection (AL-RTI) and diarrhea (GE) in LBW (cases vs. controls) by feeding modality was as follows: 41.4% for AU-RTI, 28.5% for AL-RTI, 28.5%. Diarrhea in FF was 62% and mortality rate was 7% of whom 71% died in the first 3 months due to pneumonia. On the other hand a study by ***Abul-Fadl et al., (2012)*** in Gharbia governorate

reported that children who were exclusively breastfed for the first 6 months of life suffered very low rates of recurrent episodes of ARI and diarrhea (6.18% and 6.18% respectively). Similar findings were reported by ***ElDemerdash et al., (2013)*** in Menoufia governorate. Children who suffered recurrent episodes of ARI and diarrhea over three times in the past six months were reported to be 6% and 5.5% respectively.

Baby-friendly Hospital Practices:

Egypt was one of 12 flagship countries that were selected to launch the BFHI in the World. By the mid nineteen nineties 126 hospitals were certified as Baby-friendly by the National Breastfeeding promoting committee in the MoHP. In 2014 Egypt released a ministerial decree requiring all health facilities caring for mothers and babies to become Baby-friendly by abiding to the Ten steps for successful breastfeeding and abiding with the International Code for Marketing of Breast-milk Substitutes. Lately, the Ministry of Health and Population has designated 14 hospitals and some 75 primary health care centers. Also UNICEF is partnering with Universities to establish University Baby Friendly Centers of Excellence. The lessons learnt from the BFHI have been a leading experience for other countries around the world to follow and develop their own policies and strategies. Egypt has one of the highest evaluation studies in BFHI in the world as shown in the table and figure below:



(*University hospitals)

Maternity support

The current laws in Egypt allow mothers fully paid maternity leave for 3-4 months of paid leave. She is entitled to one hour break for breastfeeding. She is also entitled to leave without pay for two years without losing her post. She is entitled two years of unpaid maternity leave for up to six years for a maximum of three children. Workplaces with women over 99 women should have an established nursery within or close to the workplace (***ILO, 2012***).

Concluding remarks::

Egypt is characterized by poor literacy rates (71% in 2017 and 74% in 2018) and poor educational attainment with only 37.1% enrolled in secondary education and 6.6 in tertiary education (2005). These figures can explain the poor practice of breastfeeding continuity into the second year among Egyptian mothers. This calls for intensive strategies for improving education and awareness among women in Egypt. This can improve their social status and ability to provide and care for their family.

II.3. LIBYA

Background

Population of Libya was 6,278,000 at time the UNICEF MICS survey (2010) conducted to assess breastfeeding status in Libya.

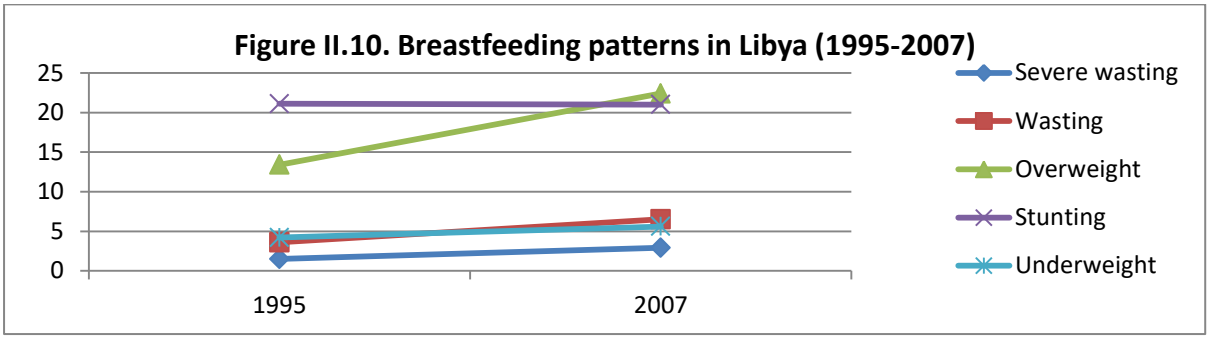
Epidemiological background and health status

Under-five mortality has decreased from 49/1000 in 1990 to 15 per 1000 live births in 2015 and has been decreasing steadily over the past 27 years from 1990 to 2017. Infant mortality rate in 2013 was 18 per 1000 live births in 2013. Neonatal mortality in 2010 was 10 per 1000 live births.

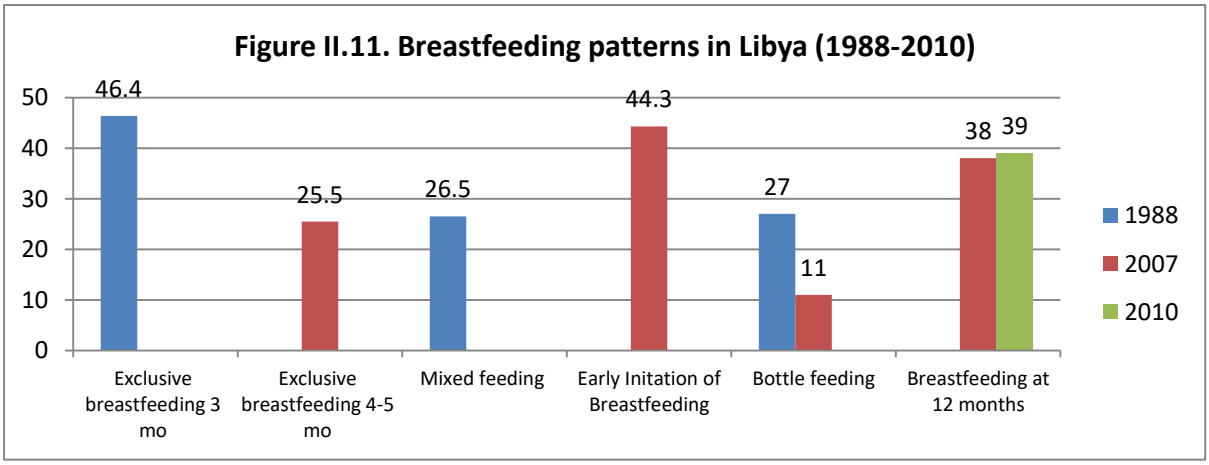
The total number of hospitals in Libya are 97 hospitals including 37 maternity hospitals.

Nutritional Status and trends in malnutrition:

Nutritional indices for overweight are characteristically high and have increased from 13.4 in 1995 to 22.4 in 2007. While one in every 4 child under the age of five years is stunted as shown in the figure below (Data from the UNICEF, WHO and World Bank joint malnutrition estimates December, 2017)



Patterns and Trends of Exclusive Breastfeeding in Libya



The earliest study conducted by Bredan et al., in 1988 showed that in a population where 32.5% of mothers were illiterate the majority 95.6% were breastfed. At 3 months EBF was 46.4% and 27% were exclusively bottle fed and 26.5% were receiving both breast and bottle. At 5 months 44.6% were still breastfeeding. At 6-12 months 25.1% were still breastfeeding.

The mean weaning age was 8.8 months. Breast and bottle were practiced by 18.6% and 4.4% respectively. While 77% were giving mixed feeds of breast and formula to their babies. The mean age at which bottle was introduced was 2.9 months.

A cross-sectional randomized study was undertaken at 11 child clinics in Benghazi, during the period 2007-2008. A total of 577 mothers were interviewed **(*Ziuo, 2010*)**.

The following feeding patterns were identified:

EBF for the first 4-6 months was 25.2%. EIBF in the first half an hour after birth was 44.3% and overall initiation was 89.0%,.

Bottle feeding rate was 11.0 % from birth.

Continued breastfeeding up to 24 months was 38.0%. More than eighty percent of women thought that breastfeeding is important.

The trends show that early feeding practices have suffered greatly over the past 30 years and can explain the high trends of stunting (21%) and obesity (22.4%).

Breastfeeding cessation

A study to assess the mother's practice of breastfeeding showed that mothers mostly primipara (24.0%) more than multipara (8.9–12.5%) mothers positioned their baby poorly at the breast while breastfeeding. Poor attachment was also more evident among primipara (30.0%) compared to multipara (20.9%) mothers (***Ram et al., 2011***).

The consequences of poor attachment included cracked nipples and mastitis.

Preterm and low birth weight infants were significantly associated with poor attachment and poor effective suckling.

Poor suckling was more (42.8%) in the early neonatal period than late neonatal period (32.9%).

In another study the most common reason cited for initiating bottle feeding was insufficient milk (55.9%) followed by refusal to feed in 16.8%., breast or nipple conditions in 8.4%, absence or illness of the mother in 7%, new pregnancy in 8.4%, weaning in 4.9% and inconvenience to the mother in 4.4% **(*Bredan et al., 1988*)**.

Baby-friendly Hospital Practices

There is no data for the status of BFHI implementation by country (***GNPR2 survey-WHO, 2017***) or of for the designation process for Libya as by the GNPR2 survey of WHO in 2017.

Maternity Support in Libya:

Libyan Labour Law entitles female employee to 6 weeks compulsory leave after delivery and 14 weeks fully paid maternity leave. There are provisions in the Law that protect women from being dismissed on grounds of her pregnancy or maternity leave.

II.4. MOROCCO

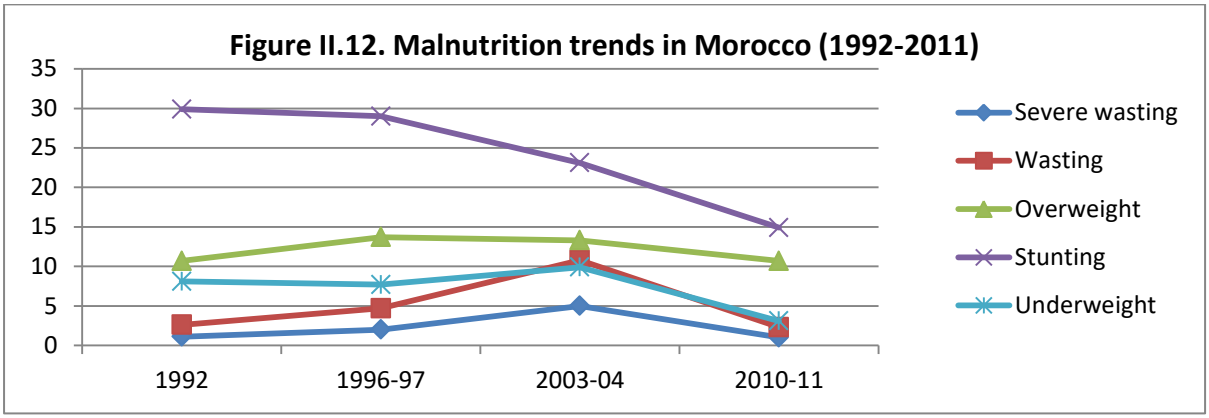
Country Prophile

Population of Morocco is 34,378,000 at time the UNICEF MICS survey conducted to assess breastfeeding status.

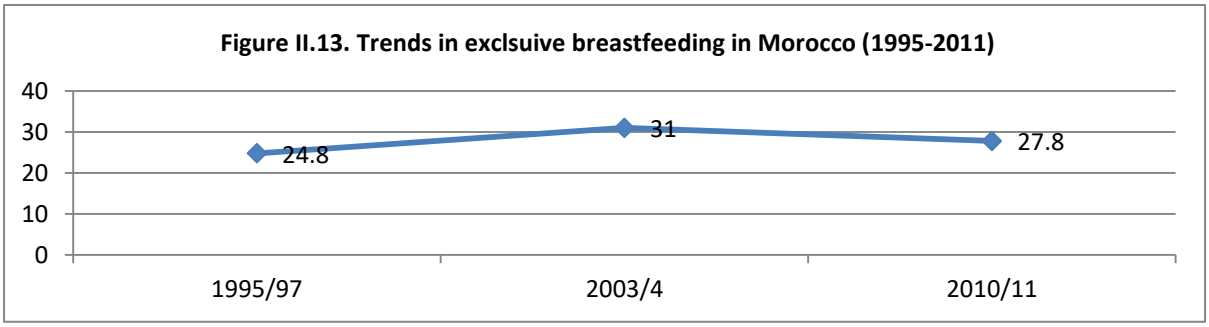
Epidemiological background and health status

Under-five mortality has decreased from 49/1000 in 1990 to 28/1000 live births in 2010. It has been decreasing steadily over the past 27 years from 1990 to 2017.

Trends in nutritional status and malnutrition



Patterns and Trends of Exclusive Breastfeeding in Morocco



The latest national survey in Morocco (PAPFAM, 2011) showed the following: **EBF** was 28% in 2010 and 31% in 2003/4. Bottle feeding rate was 46.2% in 2003/4.

Continued breastfeeding for one year was 67% and decreased to 25% in 2011.

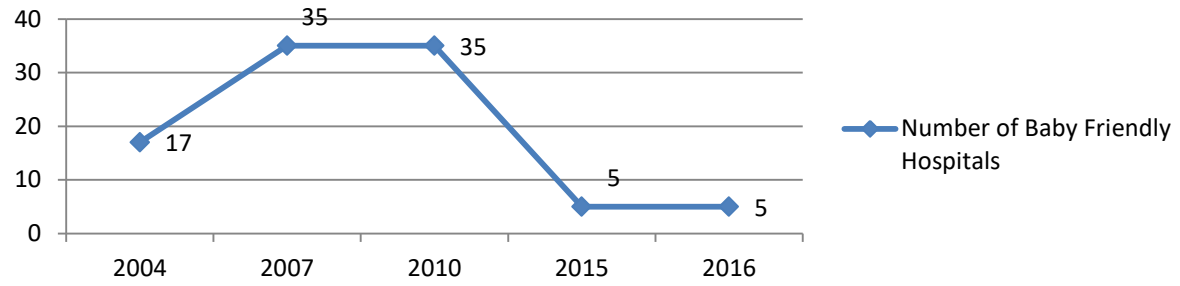
Baby-friendly Hospital Practices in Morocco

The latest estimate of EIBF in 2011 was 26.8%. EIBF showed decreasing trends from the survey conducted in 2003-4 from 52% in which there were no differences between

either sex (51.5 in males and 52.5% in females). However it was more commonly practiced in rural (58.4%) than in urban areas (45.6%).

The reported Baby-friendly hospitals in Morocco increased from 17 in 2004 to 38 in 2007 and 2010 but decreased to 5 in 2015 and 2016 (Al-Jawaldeh and Abul-Fadl, 2018). This explains the declining EIBF rates and shows that there is a need to implement BFHI in Morocco in order to improve the EIBF rates.

Figure II.14. Trends in Baby Hospitals in Morocco



Global database, UNICEF (2018)

Local studies on status and interventions for improving EBF

A comparative prospective study conducted in 2012 / 2013 for 400 women who were divided into two groups, one of which received support counseling for EBF. The women were followed for a period of 6 months. The primary outcome studied showed the duration of EBF was 4 months and half versus 3 months in the non-intervention group. At the end of the study, the rate of EBF was 76% among the counseled mothers vs. 11.5% in the non-intervention group (NIG) with a significant difference, p=0.00.

Formula feeds were introduced by 16% of the counseled mothers vs. 31% in the NIG.

At six months breastfeeding rate was 79% versus 58% in the NIG group (P=0.00), with an EBF of 58% in the study group and 19% in the NIG (p=0.000). Also, 36% of the counseled women gave formula milk versus 63% in the NIG.

The authors concluded that support through counseling can have a positive impact on the duration of breastfeeding by increasing the duration of EBF. This support was especially useful in preventing early addition of other liquids (**Radouani et al., 2015**).

Complementary Feeding (CF)

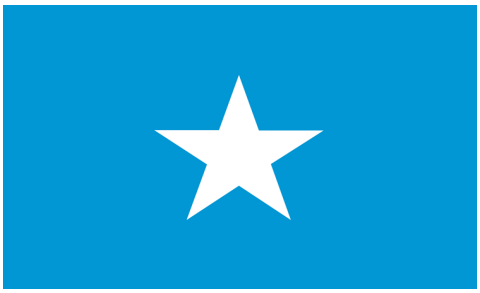
In Morocco CF is usually started earlier than six months. The 2003/4 survey showed that timely introduction of food at 6-9 months was 90%. However this has decreased dramatically since then.

A cross sectional study for 574 mothers with children aged 0-24 months, who attended 12 health centers in Casablanco showed that introduction of foods before 6 months was practiced by 30.4% and at 6 months was 66.5%. Around 85% of women did not receive education about managing CF and that 93% are not counseled for breastfeeding. For mothers whose children were 6-24 months, 74.6% reported that they were not given information about dietary diversity. However 62% planned to start introducing foods in a diversified manner after 6 months and 36% before 6 months. The group included 10% who were EBF and 90% on mixed feeding (***Habibi et al, 2016***).

Maternity support in Morocco

Morocco offers 14 weeks maternity leave that are fully paid (100%) by the national social security fund. The labour Code (article 46, Moroccan Public Service Law) also includes three days fully paid paternity leave. Pregnant women are entitled to one year of unpaid leave. Moroccan activists, the Ruling Party of Justice and Development (PJD) are seeking to extend maternity leave to 16 weeks of fully paid maternity leave.

II.5. SOMALIA



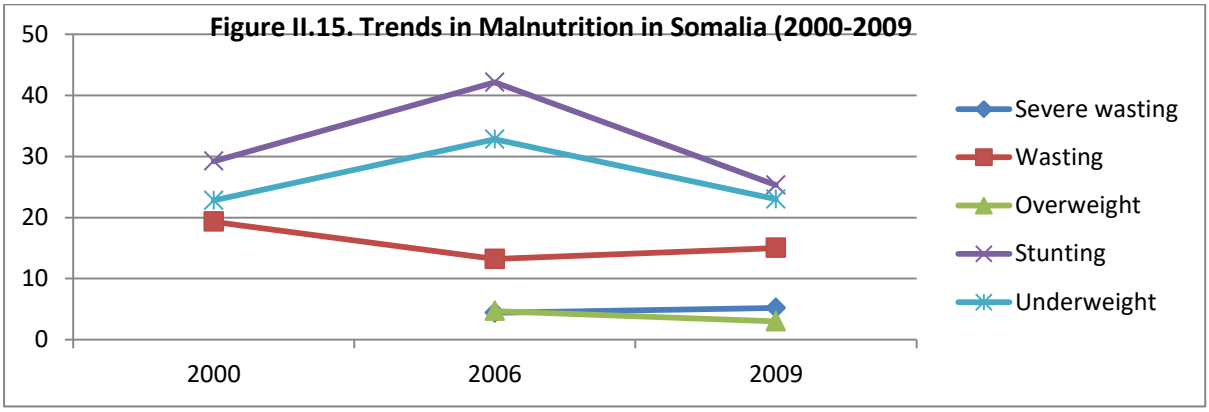
Background

Somalia has a pollution of 14,74 million (2017) (World Bank) It has one of the world's longest running humanitarian crises with droughts and floods augmented by ongoing violence and conflicts. Somaliland and Putland remain somewhat less exposed to such conflicts.

Trends and Status in Infant & Young Child Nutrition and Malnutrition

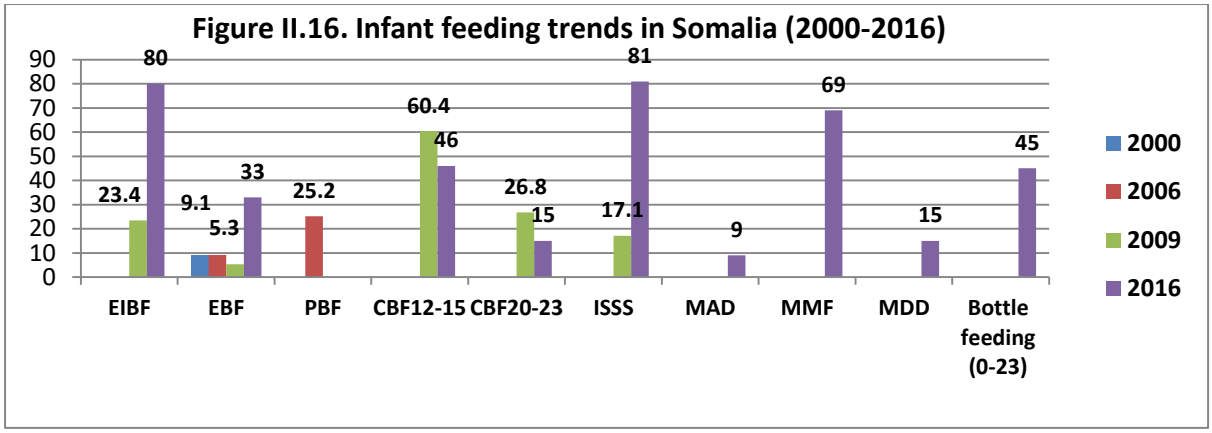
Childhood malnutrition is a major problem. The national anthropometric survey in 2009 showed that 23.2% of children below five years of age were stunted. It was highest in Central and South Somalia (31.6%) and lowest in Putland at 10.7%.

Figure II.15. Trends in Malnutrition in Somalia (2000-2009



Trends and Status of IYCF in Somalia: Breastfeeding

Somalia has high rates of breastfeeding with 98.2% ever breastfed. EIBF and EBF have improved from the 2009 micronutrient survey and 2011 MICS survey as 3 out of 10 are exclusively breastfed (33%) and 8 out of 10 are put to the breast within one hour of birth (UNICEF, 2016). But continuity of breastfeeding is very low as less than one half continue for 12 months (46%) and only 15% continue for two years (***UNICEF, 2016***).



EIBF: early initiation of breastfeeding, EBF: exclusive breastfeeding, PBF: predominant breastfeeding, CBF: continued breastfeeding, ISSS: introduction of solids, semi-solids soft foods, MAD: minimum acceptable diet, MMF: minimum meal frequency, MDD: minimum dietary diversity.

Baby-friendly Hospital Practices

EIBF varies from 23.4% in 2009 to 80% in 2016. However it was less commonly practiced in rural areas (76%) than in urban areas (83%) and in females (78%) than males (81%), (***UNICEF, 2016***).

Until 2016 (GNPR2-WHO, 2017) there were no data reported for facilities designated as Baby-friendly. This explains the low and declining EIBF rates and shows that there is a need to implement BFHI in Somalia in order to improve the EIBF rates.

Complementary Feeding

Introduction of solids and semi-solids (ISSS) at 6-8 months has increased from 15.6 in 2006 to 17.1 in 2009.

Findings from 2016 survey in Somalia

The survey was conducted to assess feeding and micronutrient status. The ISSS at 6-8 months is 80%. The Minimum acceptable diet (MAD) and iron-rich foods was found to be a challenge for most parts of Somalia. The overall findings included the following:

Bottle feeding practice, although uncommon is practiced by one half of the mothers (***UNICEF, 2016***). .

ISSS at 6-8 months at national level is 81%. It is 84% in central south Somalia, 77% in Somaliland and 76% in Punt land.

Minimum meal frequency (MMF) at 6-23 months is 69% at national level. It is 66% in central south Somalia, 74% in Somaliland and 71% in Puntland.

Minimum meal diversity (MDD) at 6-23 months is 15% at national level. It is 21% in central south Somalia, 7% in Somaliland and 9% in Puntland.

MAD (6-23 months) is 9% at national level. It is 11% in central south Somalia, 6% in Somaliland and 7% in Puntland.

Consumption of iron-rich foods (6-23 months) is 48% at national level. It is 60% in central south Somalia, 22% in Somaliland and 42% in Puntland.

Child Feeding index (6-23 months) is 25% at national level. It is 26% in central south Somalia, 14% in Somaliland and 26% in Puntland. At age 6-8 months it is 63% at national level ranging from 69% in central south Somalia, 51% in Somaliland and 63% in Puntland. At age 9-11 months it is 36% at national level ranging from 41% in central south Somalia, 19% in Somaliland and 47% in Puntland. While at age 12-23 months it decreases markedly to 7% at national level ranging from 9% in central south Somalia, 0% in Somaliland and 10% in Puntland.

There are maternal micronutrient supplementation coverage schemes for iron tablets (58%) and folic acid (32%), combined iron and folic acid (20%) and multiple micronutrient tablets (15%). Central and

southern Somalia are highest for all (62%, 37%, 22% and 18%), Somaliland has the lowest coverage for the first three schemes (54%, 22%, 14% respectively) and Putiland has the lowest for the fourth (48%, 26%, 19%, 8% respectively).

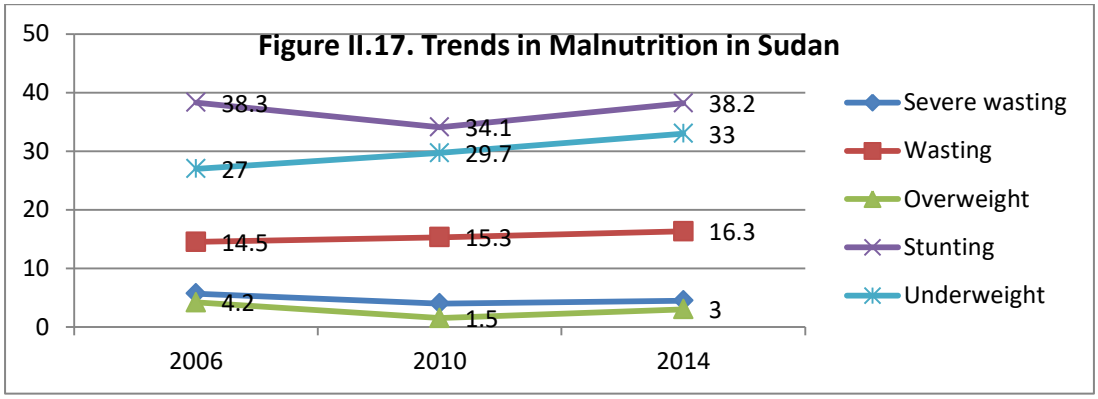
Maternity Support

Somalia entitles female employees to 14 weeks maternity leave (paid as 50% of her monthly salary). Her wages are paid by the employer and not by the government. The ILO states that protection of women against dismissal should follow the period after her return to work. The period of protection varies from one country to another in Somalia it is one year following birth. ***(ILO, 2012).***

II.6. SUDAN

Nutritional status of Infants & Young children (IYC)

Stunting, wasting and underweight have remained high if not increasing over the past decade. Feeding practices in addition to prevalence of communicable diseases and poor sanitation maybe the underlying causes.



IYCF Trends and Status: Breastfeeding

EBF rate increased from 41.0% in 2010 to 54.6% in 2014 according to national surveys (UNICEF, 2010 and 2014). Predominant breastfeeding (PBF) changed little from 2010 (79.4%) to 2014 (80.0%). This indicates that the most common feeding pattern in Sudan is PBF and not EBF. Cultural beliefs and influence of surrounding support groups take the upper hand in Sudan. This means that educational campaigns need to target families rather than individual mothers.

The increase of EBF was more in the males than in the females (from 40.3% to 55.4% vs. from 41.6% to 53.9% respectively) with a difference of 15 points of improvement among males and 12 points for females. PBF did not show any difference in between sexes over the two periods (79.4% and 79.9% in males and 80.1% and 80.7% in females). This indicates that mothers are not eager to

introduce foods to their females; rather they are more inclined not to breastfeed them as often as they do for males and prefer to give them non-nutritious fluids and beverages.

EBF is higher in rural (51.4%) compared to urban (55.7%) communities. The difference was less in 2010 (40.0% in urban vs. 41.3% in rural areas). PBF did not change in rural (81.8% vs. 81.8% in 2014) but increased in urban (73.6% in 2010 vs. 77.2% in 2014). The difference could be related to the demands of urbanization and working women. However it could be due to the pressure of marketing of drinks and beverages in urban communities vs. rural communities.

EBF decreased progressively by wealth (WQ1= 57.3%, WQ5=55.3%), but the decrease was not high. PBF also decreased from 80.9% to 70.2% across the wealth quintiles indicating that this is more a practice of the poor rather than the rich and educated.

EBF also decreased by level of education being 51.1% in illiterate mothers and 56.1% in mothers with primary education and 59.5% among mothers with secondary (61.3%) and higher education (55.7%). While PBF also decreased by level of education being76.6% in illiterate mothers and 80.3% mothers with primary education vs. 87.2% among mothers with secondary education but decreased to 66.3% among mothers with higher education. However the decrease in the latter could be due to the increase in EBF but may also be due to the earlier introduction of foods.

Breastfeeding continuity

Breastfeeding continuity (CBF) is the highest in the region which has maintained its high levels over the past two surveys from 2010 and 2014 despite the low EBF. The high PBF rates may have played a role in sustaining such high CBF practices.

CBF for 12 to 15 months was 87% in 2010 and 89.4% in 2014. It was high in both rural and urban communities (90.8% in 2010 and 90.8 in 2014 respectively). It maintained its high levels across the wealth quintiles (WQ1= 90.2% and WQ5= 94.5%). It was also high in all mothers with different levels of education being 85.2% in illiterate mothers and 90.6% in mothers with primary education and 95.2% and 95% among mothers with secondary and higher education (***DHS, 2014***).

CBF for 20 to 23 months increased from 40.1 in 2010 and 48.8 in 2014. It was higher in males (50.7%) than in females (46.6%) in 2014. It was higher in rural than in urban communities (49.8% vs. 46.7% respectively). It was not affected by wealth (WQ1= 45.1% and WQ5= 44.7%). It was higher in women with lower levels of education being 55.2% in illiterate mothers and 42.5% in mothers with primary education vs. 54.2% in mothers with secondary education and 41 among mothers with higher education (DHS, 2014). However trends showed that CBF for two years increased from 41.5% in 2010 to 50.4% in those with higher education in 2014.

The overall rate of CBF in the second year (12-23 months) increased from 69.7% in 2010 to 72.5%, which are still the highest in the region.

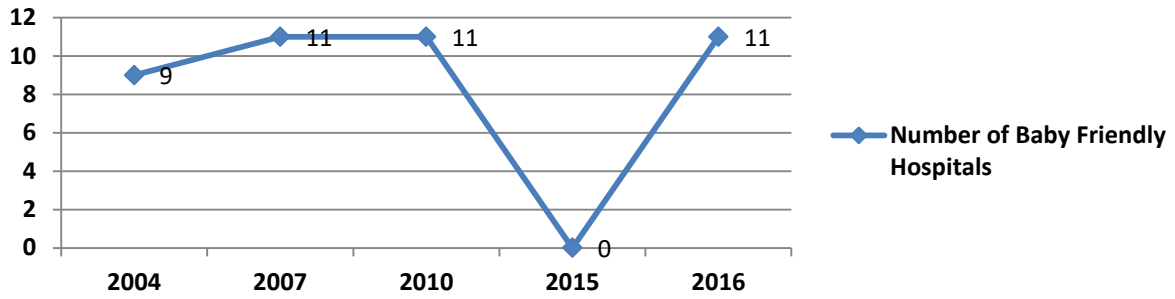
Baby-friendly Hospital Practices

The latest estimate of EIBF in 2014 was 40.8%. EIBF showed decreasing trends from 64.6% in 2006 and 61.5 in 2006. EIBF was more commonly practiced in in rural areas (44.9%) than in urban areas (39.8%). No mention of indicators was mentioned about initiation through skin-to-skin or the

duration of skin to skin contact before the first breastfeed.

Until 2016 (GNPR2-WHO, 2017) there were no data reported for facilities designated as Baby-friendly in Sudan. However, ***Al-Jawaldeh and Abul-Fadl (2018)*** reported trends of BFHI in Sudan over the past two decades as shown in the figure below. This explains the low and declining EIBF rates and shows that there is a need to implement BFHI in Sudan in order to improve the EIBF rates.

Figure II.18. Trends in the Baby-friendly Hospital Initative progress in Sudan



Complementary Feeding

ISSS at 6-8 months was 64% in 2010 and 61.2% in 2014. The ISSS was higher in males 65.8% in 2010 vs. 62% in 2014 than in females 62% in 2010 vs. 60.2% in 2014.

Timely CF: ISSS (6-8 months) was higher in urban (72.3%) in 2010 and in 68.1% in 2014 and lower in rural (61% in 2010 and 59% in 2014).

ISSS increased with increasing wealth index from 53.5% in WQ1 to 83.3% WQ5 respectively. ISSS increased with level of education from 49.8% in the illiterate to 62.7% in primary education and 73.3% in the children of women with secondary and higher education and 91% in children with higher education (***DHS, 2014***).

The minimum meal frequency (MMF) increased from 30.3% in 2010 to 42.1% in 2014. MMF was the same in males (30%) than females (30.4%). MMF increased in urban from 33.4% in 2010 to 41.5% in 2014, and also in rural areas from 29.1% to 42.3%. MMF was lowest between 6 to 11 months (37.6%) and increased progressively to a peak of 51.8% at 20-23 months. MMF increased by wealth quintile from 34.3% in WQ1 to 49.8% in WQ5. MMF was highest in the highly educated (53.5%) and lowest in those whose mothers had primary education (42.1) or no education (37.2) (***DHS, 2014***).

The minimum dietary diversity (MDD) is percent of children aged 6 to 23 months receiving 5-8 of the recommended food groups. National levels are 24. It is the same in males (23.8) and females (24.1).

MDD is higher in urban areas (35.7) compared to the rural areas (19.7). MDD was lowest between 6 to 11 months (15.9) and increased to a peak of (27.5) at both age groups of 16 to 19 and 20 to 23 months. It increased with wealth from 9.3% in WQ1 to 51.5% in WQ5. It was highest in the highly educated (46.7%) and lowest in those whose mothers had primary education or no education (15.3% and 19.8% respectively) (DGS, 2014). MDD is very much affected by wealth and level of education. Since poor

mothers are usually illiterate it follows that MDD is mainly caused by poverty.

The minimum acceptable diet (MAD) was below the minimum acceptable levels reaching 14.7%. These are among the lowest in the region. It was similar in both males and females (14.7% and 14.8% respectively). MAD was higher in urban (18.4%) than rural communities (13.4%), but still low in both areas. MAD increased by age from 10.0% in second half of the first year increasing to 17.4% in both the 16 to 19 and 20-23 age groups. MAD increased with wealth from 5.8% in WQ1 to 29.6% in WQ5. MAD increased with education from 10.5% who were illiterate or had primary education (11.5% EBF rate increased from 41.0% in 2010 to 54.6% in 2014 EBF rate increased from 41.0% in 2010 to 54.6% in 2014 to 23.6% in mothers with secondary education and 30.1% in mothers with higher education.

It clear that Sudan suffers a high rate of poverty that influences their feeding practices. Improving their access to diverse foods and using women with higher education to model feeding practices to the poor can be useful in reversing such practices. The climate may be playing role in limiting their practice of feeding diversity of foods as such communities rely more on fluids rather than foods, except for the rich who have more access to eating more nutritious foods.

Local research studies

A study was conducted in Wad-Medani town, Gezira state of Sudan for 166 women to assess the breastfeeding patterns in children below two years of age. The study revealed that 54.2% of them initiated breastfeeding after one hour from delivery. Mothers who continued EBF for 4 months were 64.4%. The main reason led the mothers to wean their infants was pregnancy 54.1%. There was also a significant association between breastfeeding duration and age of the mother, mother occupation, pregnancy and family income (***Haroun et al., 2008***).

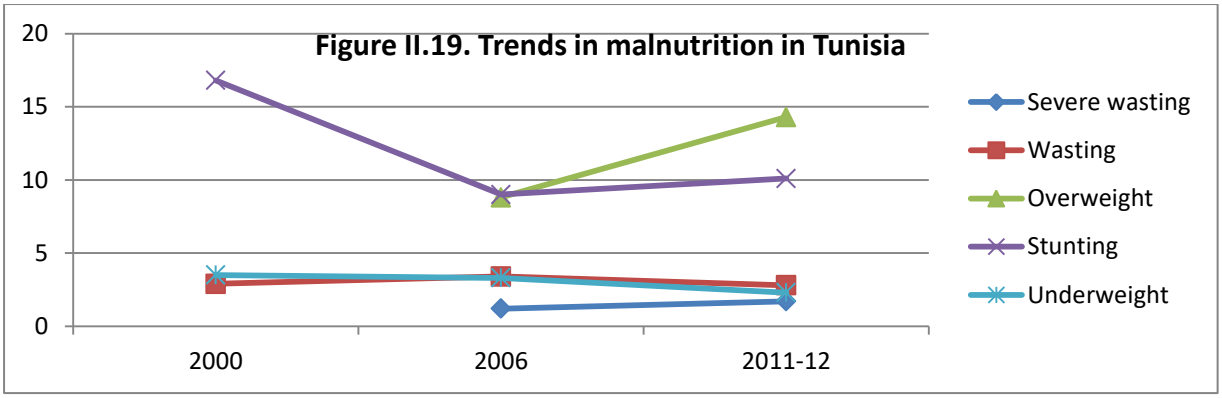
Maternity support in Sudan

Maternity leave is granted for 8 weeks (four weeks before and 4 weeks after confinement) for each year of service. Literacy rates in Sudan are very low for females (65.8%) compared to males 82% at ages 15+ years (2012).In 2013, 33% of the female working age population was part of the labour force, while 76% of the male working-age population was part of the labour force. Women represent 29% of the workforce. (Word Bank (2015, World development indicators (http://data.worldbank.org/products/wdi.)

II.7. TUNISIA

Tunisia is a progressive nation that is struggling in an era of global economic demise. It has well developed health care systems that allow it to monitor and upgrade health care services and conduct fruitful outreach programs and achieve success in many of its developmental indicators. However infant feeding practices have always been a challenge to the government especially that marketing practices of companies are minimally controlled and the liberation acts of women has driven women to seek western practices blindly, as part of the modernization process of industrialization. Women in civilization seek to bridge the gap between the differences in the cultural values between East and West. This is evident in the improved rates of infant feeding among the highly educated in various countries but lower rates in others. As the workforce among women increases, the pressures on them to wean their children early increases, as a result the quality of infant feeding deteriorates. Working mothers with children need to be treated differently than men, when in the same position of work. When these children grow in an environment that is productive, they grow to be productive and this is how countries become economically more superior.

Trends and status of Infant and Young Child Nutritional Status



Trends and Status of IYCF: Breastfeeding

EBF rate (up to 6 months of age) has decreased progressively from 18% in 1988 to 6.2% in 2006 and is currently at 8.5% according to the latest national survey of 2011.

The extent of decline in EBF was more in males than females; 7.1% and 10.2% respectively.

It was similar in both rural and urban communities (8.4% and 8.6% respectively).

EBF was highest in the first month of life (17%) but decreased progressively to 6.5% at 2-3 months and 2% at 4-5 months of age.

It decreased progressively by wealth (WQ1= 15.7% to WQ5= 7.1%). It also decreased by level of education being 15.5% in illiterate mothers and 14% in mothers with primary education vs. 5.9% and 7.8% among mothers with secondary and higher education respectively (***UNICEF, 2012 and UNICEF, 2018***).

EBF status by residence and region

EBF was similar in both rural and urban communities (8.4% and 8.6% respectively). At regional level, it was highest in South Est region (22.1%) and South West (16.0%) and was lowest in North West (2.0%) and Nord East (2.4%) (***MICS 4, 2011-2012***).

Predominant breastfeeding

Predominant breastfeeding (PBF) in 2012 was higher than EBF (34%). It was much lower in males than females (29.4% vs. 39.2% respectively). It was higher in rural than in urban communities (41.5% vs. 30.4% respectively). PBF was highest in the first month of life (49.9%) and decreased to 38.9% at 2-3 months reaching 14.9% at 4-5 months. It decreased progressively by increasing wealth index (WQ1= 43.4% WQ5=23.3%). It also decreased by level of education being 49.3% in illiterate mothers and 35.9% in mothers with primary education and 31% and 29.6% among mothers with secondary and higher education (***UNICEF, 2018***).

Breastfeeding continuity

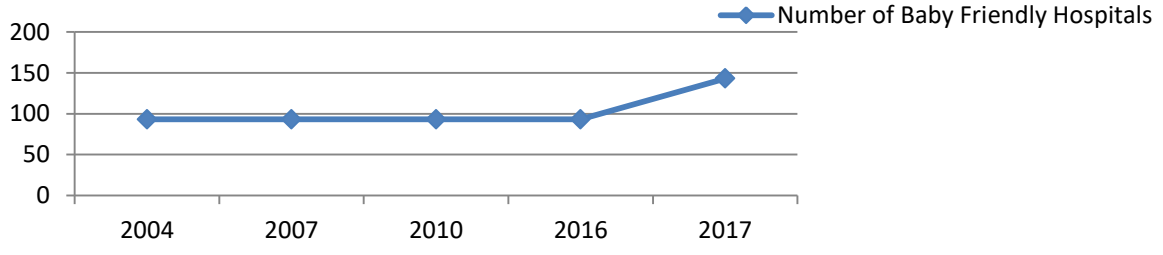
Despite the very low (lowest in the region) of EBF, yet continued breastfeeding (CBF) into the second year was comparatively not as low. However trends in CBF at 12 to 23 months have decreased from 50.8% in 1988 and 33.9% in 2012. It was higher in males (37%) than females (30.1%). It was higher in rural than in urban communities (30.5% vs. 39.7% respectively). It decreased progressively by wealth (WQ1= 46.9%, WQ5= 29.8%). It also decreased by level of education being 52.7% in illiterate mothers and 33.5% mothers with primary education and 36.4% and 22.7% among mothers with secondary and higher education respectively with a mean of 30.6% (***UNICEF, 2012***).

Baby-friendly Hospital Practices

Early Initiation of breastfeeding

The latest estimate of EIBF in 2011 was 39.9%. It was more commonly practiced in rural areas (46.5%) than in urban areas (36.1%). The 2016 (GNPR2-WHO, 2017) reported no data for facilities designated as Baby-friendly. However ***Al-Jawadeh and Abul-Fadl (2018)*** reported that there were 93 Baby-friendly hospitals reported over the past two decades as shown in the figure below. The latest report by UNICEF in 2017 indicates that Baby-friendly hospitals in Tunisia were 143 (UNICEF, 2017). This explains the low and declining EIBF rates and shows that there is a need to implement BFHI in Tunisia in order to improve the EIBF rates.

Figure II.20. Trends in the Baby-friendly Hospital Initiative in Tunisia (2004-2016)



Complementary Feeding

The timely CF as assessed by ISSS at 6-8 months was 83.8% in 2012. The ISSS was lower in males 81.9% than females (85.8%). ISSS was lower in urban (79.3%) vs. rural areas (93.1%). ISSS decreased with increasing wealth index from 86.7% and 85.5 in WQ1 and WQ2 to 80.4% in WQ4. ISSS decreased with level of education from 87.8% in the illiterate and mothers with primary education to 81.1% in the children of women with secondary and higher education (***UNICEF, 2012).***

By region ISSS was highest in Nord Quest (77%), Kairoan in the Center West (75.2%) and Center Est (73.2%). It was lowest in Sud Est (50.8%) and Grand Tunis (52.2%) (***MICS, 2006***).

The MMF was 48.2%. MMF was lower in males (47.6% than females (49%). MMF was higher in urban (53.1%) than in rural (39.9%). MMF was lowest between 6 to 11 months (36.4%) and increased to a peak of 57.2% after 16 months with a mean of 54.8% at 12-23 months. MMF increased by wealth quintile from 29.5% in WQ1 to 60.8% in WQ5. MMF was highest in the highly educated (54%) and lowest in those whose mothers had primary education (42.3%) or no education (34.3%) with a mean of 40% in this group mothers to a high of 54% among more educated women, indicating that education plays an important role in empowering women living in countries with in emerging stages of development.

MAD, MAD: There was no data for MDD and MAD or iron fortified or rich food intake. However iron deficiency anemia in children under-five of age was reported as 21.7% in 2005 and has increased to 28.8% in (***Stevens et al, 2013***). ***El-Atti et al.,*** (2005) assessed the prevalence of anemia in children under-five years of age and found that 29% had anemia of which 70% was related to iron deficiency anemia. The highest prevalence was in two regions the South west and district of Tunisia.

Maternity Support in Tunisia:

In the public sector, the working mothers benefit from 2 months of paid maternity leave on birth and 4 months of postnatal leave with 50% of the insured average daily wage. In addition, a breastfeeding rest of one hour per working day is granted for a maximum period of six months from the end of the maternity leave. In the 8th of March 2019, the maternity leave was officially prolonged from 2 to 3 months and a 15 days parental leave is paid for the father.

In the private sector, female employees are entitled to 30 days of paid maternity leave on birth of a child and a breastfeeding rest of one hour/working day during the first year after delivery.

II. 8. Summary and Conclusions

The North African countries of the EMR included in this section were Djibouti, Egypt, Libya, Morocco, Sudan, Somalia and Tunisia. In Djibouti, trends in malnutrition have increased, stunting is 33.5% and underweight is 29.8%, but severe wasting has decreased. EBF has decreased to 4.7% in 2014. CBF to two years in less than 5%. ISSS at 6-8 months is 23.1%. EIBF) is 52% and is higher in illiterate mothers. There are no reported Baby-friendly hospitals. Maternity leave is 14 weeks paid leave before or after birth.

In Egypt EBF are reported as 39.5% in 2014, but more recent surveys show that EBF are much lower particularly in urban populations. EBF have the longest mean duration of a breastfeed and highest frequency of breastfeeding. Initiation of breastfeeding was delayed in Upper Egypt 37.5% with high intake of prelacteals 69%. CBF to two years in 22%. MAD was 23.3%. %. It was highest in families from lowest and highest wealth quintiles and lowest in the middle class. There

are many barriers to BFHI although several evaluations were done and recently 14 hospitals and a number of primary health care centers were assigned as Baby-friendly. Maternity leave has increased from 3 to 4 months as fully paid leave, but restricted for the first three children.

Recent studies for infant feeding in Libya are scarce. EBF for the first 4-6 months was 25.2%. EIBF in the first half an hour after birth was 44.3%. CBF for 12 months is 39%. There are no reported Baby-friendly hospitals. Women are entitled to 14 paid maternity leave.

In Morocco EBF was 28% in 2010 and 31% in 2003/4. Bottle feeding rate was 46.2% in 2003/4.Continued breastfeeding for one year was 67% and has decreased to 25% in 2011. EIBF in 2011 was 26.8%. 35 Hospitals were Baby-friendly in 2007 but decreased to 5 in 2016. ISSS is 90%. Maternity leave is fully paid and offered for 14 weeks.

Three in ten mothers in Somalia EBF. EIBF varies from 23.4% in 2009 to 80% in 2016. There are no Baby-friendly hospitals in Somalia. Adequate complementary feeding is very low (9%) challenged by the low MDD (15%). Consumption of iron rich foods is particularly low in Somaliland (22%) compared to central and south Somalia (60%). Maternity leave is 50% paid and is offered for 14 weeks after delivery.

In Sudan EBF rate increased from 41.0% in 2010 to 54.6% in 2014 and PBF is 80%. CBF into the second year is 72.5%. Minimum acceptable diet is 14.7% and is mainly related to low MDD caused by poverty. There are 11 Baby-friendly hospitals in Sudan but the latest estimate of EIBF in 2014 was 40.8%. Maternity leave is granted for 8 weeks (four weeks before and 4 weeks after confinement).

In Tunisia EBF is 8.5% and PBF is 34%. However CBF in the second year is 33.9%. EIBF is only 39% despite the presence of 143 Baby-friendly hospitals in Tunisia. ISSS is 83.8% but MMF is 48.2% and iron deficiency anemia in under-five of age was reported 21.7%. Maternity leave is fully paid for 14 weeks.

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المقال الثانى: أنماط الرضاعة الطبيعية فى بلدان شمال افريقيا من إقليم شرق المتوسط

الملخص و الاستنتاجات

تتضمن بلدان شمال افريقيا التابعة لإقليم شرق المتوسط الدول الآتية: جيبوتي ، جمهورية مصرالعربية ، ليبيا ، المملكة المغربية، السودان ، الصومال و تونس.

في **جيبوتي** فإن أنماط سوء التغذية فى تزايد فقد وصل التقزم إلى 33.5 في المائة ونقص الوزن 29.8 في المائة ولكن معدلات الهزال الشديد قد انخفض إلى 4.7 في المائة. ولكن من الغريب أن 5 في المائة فقط من الأمهات يواصلن الاستمرار بالرضاعة الطبيعية لعامين . أما بالنسبة للأغذية التكميلية فإن 23.1 في المائة يدخلن الوجبات فى الوقت السليم أى عند عمر من 6 إلى 8 شهور. ولا توجد مستشفيات صديقة للطفل فى جيبوتى وعلى الرغم من ذلك فإن حوإلى نصف الأمهات يبدأن الإرضاع فى الساعة الأولى وهذه الممارسة أعلى فى الأمهات الأميات. وتمنح الأمهات العاملات فى جيبوتي 14 أسبوع أجازة مدفوعة الأجر قبل وبعد الولادة.

في **جمهورية مصرالعربية** تبلغ الرضاعة الطبيعية المطلقة 39.5 في المائة حسب الدراسات القومية فى 2014 ولكن تؤكد الدراسات المحدودة أن هناك انخفاض فى الرضاعة المطلقة فى مناطق مختلفة فى شمال وجنوب البلاد و أن هذا يرجع إلى ممارسات الرضاعة الطبيعية غير السليمة كإدخال مشروبات مبكرة للوليد (69 في المائة) والتأخر فى بداية الإرضاع على الثدي وخلال الساعة الأولى من الولادة، كما أن انخفاض نسبة الرضاعة الطبيعية المطلقة يتلازم مع انخفاض مواصلة الرضاعة الطبيعية لعامين والذى يصل إلى 22 في المائة . أما بالنسبة للأغذية التكميلية فهناك تدنى فى مؤشرالنظام الغذائى المقبول والذى يبلغ 23.3%. وهناك برنامج للمستشفيات الصديقة للطفل بوزارة الصحة والسكان وقد تم بالفعل اعتماد 14 مستشفى صديق للطفل وتعتبر مصر من أكثر الدول التى قامت بعمل دراسات لتقييم هذا البرنامج منذ بدايته وحتى الآن. كما أن هناك تشريعات لدعم الأم العاملة المرضع بمنحها 4 شهور بدلاً من 3 شهور مدفوعة الأجر مع أجازة غير مدفوعة لمدة عامين (لثلاث أطفال فقط) مع الاحتفاظ بمركزها وعدم فصلها عن العمل بسبب الحمل أو الولادة أو أجازة الوضع.

تبلغ الرضاعة الطبيعية المطلقة في **ليبيا** 28 في المائة و مواصلة الرضاعة لسنة قد انخفض من 67 في المائة فى بداية 2000 إلى 25 في المائة فى عام 2011 وتلا ذلك انخفاض فى المستشفيات الصديقة للطفل من 35 مستشفى إلى 5 مستشفيات فقط فى 2016. وتدخل الأغذية التكميلية فى الوقت المناسب (6-8 شهور من العمر) فى 90% من الأطفال. كما تمنح الأم العاملة 14 أسبوع بعد الولادة مدفوعة الأجر بالكامل.

في **الصومال** فإن ثلاث من كل 10 أمهات ترضعن أطفالهن رضاعة طبيعية مطلقة فى الشهور الستة الأولى من عمر الطفل على الرغم من أن 80 في المائة من الأمهات تبدأن بالرضاعة على الثدي فور الولادة أى فى الساعة الأولى ولكن لا توجد مستشفيات صديقة للطفل. وتعانى الصومال من نقص شديد فى ممارسات التغذية التكميلية المقبولة إذ أن 9 في المائة فقط من الأمهات ينطبق عليهن هذا المعيار ، ويرجع ذلك إلى انخفاض فى مؤشر الحد الأدنى لتنوع الغذاء ، كما أن هناك نقص فى ادخال الأغذية

الغنية بالحديد ، وهناك تفاوت ما بين المناطق فى هذه الممارسات إذ تعانى منطقة صوماليلاند من أسوء المعدلات بالنسبة لمنطقة جنوب ووسط الصومال. وتمنح الأم العاملة 14 أسبوع بعد الولادة بنصف الأجر مدفوعة من صاحب العمل.

فى **السودان** ارتفعت نسبة الرضاعة الطبيعية المطلقة من 41 في المائة فى 2010 إلى 54.6 في المائة فى 2014 ولكن من المثير أن نمط الرضاعة الطبيعية السائد بالسودان فى الشهور الستة الأولى من عمر الطفل هو الرضاعة الطبيعية الغالبة 80 في المائة ولهذا فإن مواصلة الرضاعة الطبيعية لعامين يصل إلى أعلى المعدلات فى إقليم شرق المتوسط وهو 72 في المائة. وهناك 11 مستشفى صديقة للطفل بالسودان. أما بالنسبة للأغذية التكميلية فإن 61.2 في المائة يدخلن الوجبات التكميلة عند عمر من 6 إلى 8 أشهر ولكنها أعلى بكثير فالفئات القادرة والمتعلمة (83.3 في المائة و91 في المائة) و لكن مؤشر الحد الأدني للنظام الغذائى المقبول منخفض جداً (14.7 في المائة) وهذا يفسر ارتفاع نسبة التقزم (38.2 في المائة) . كما تمنح الأم العاملة أجازة وضع لمدة 8 أسابيع (4 قبل الولادة و4 بعد الولادة) وهذا يفسر نسب الرضاعة المطلقة المتدنية.

في **تونس** تبلغ نسبة الرضاعة الطبيعية المطلقة 8.5 في المائة والرضاعة الطبيعية الغالبة 34 في المائة ومواصلة الرضاعة الطبيعية لعامين 33.9 في المائة ، وعلى الرغم من وجود 143 مستشفى صديق للطفل إلا أن 39 في المائة فقط من الأمهات تبدأن الرضاعة الطبيعية فى الساعة الأولى بعد الولادة . أما بالنسبة للأغذية التكميلية فإن 83.8 في المائة يدخلن الوجبات التكميلية فى الموعد المحدد كما أن المعدل الأدني لتواتر التغذية 48.2 في المائة ، ويبلغ نسبة نقص الحديد فى الأطفال دون الخامسة 21.7 في المائة وهذا يشكل خطراً على قدراتهم التعليمية المستقبلية. وتمنح الأم العاملة أجازة مدفوعة الأجر بالكامل لمدة 3 شهور وهذا يفسر نسبة الرضاعة الطبيعية المطلقة المتدنية.

في **المغرب** ، بلغ معدل الرضاعة الطبيعية المطلقة 28 في المائة في عام 2010 ، كما انخفض معدل مواصلة الرضاعة الطبيعية لمدة عام من 67 في المائة في بداية سنة 2000 إلى 25 في المائة في عام 2011. وبلغت معدلات البدء المبكر للإرضاع على الثدي في عام 2011 فقط 26.8 في المائة على الرغم من وجود 35 مستشفيات كانت صديقة للأطفال في عام 2007 ولكنها انخفضت إلى 5 مستشفيات في عام 2016. إلا أن إدخال الوجبات عند عمر من 6 إلى8 أشهر يبلغ 90 في المائة ، كما تُدفع أجازة الأمومة بالكامل وتقدم لمدة 14 أسبوعًا وهذا دعم قوى من الحكومة ولكنه لا يساعدها على الرضاعة الطبيعية المطلقة لمدة 6 شهور ولا يمكنها من مواصلة الرضاعة لعامين مع الأغذية التكميلية.

ونستنتج مما سبق أن هناك ضغوطاً كثيرة وتحديات تواجه المرأة العربية والافريقية فى كافة بلدان الإقليم وأن الضغوط الاقتصادية التى تحتم على المرأة خروجها للعمل ولكن التشريعات الحالية للأم المرضع العاملة لا تساعدها على ممارسة دورها الفعال في الحفاظ على النسل القوى بدنياً وعقلياً لضمان صحة وإنتاجية الأجيال المستقبلية ولذلك فإن دعم المرأة العاملة بمد أجازات الوضع المدفوعة للأم والأب مع تكثيف الوعي بالممارسات الناجحة في الرضاعة الطبيعية ونشر ثقافة الأماكن الصديقة للطفل والأم ... يجب أن يدرك ضمن التوجهات الإستراتيجية الضرورية للحفاظ على صحة وتغذية الطفل العربي والافريقي والبلدان النامية بوجه عام لحتقيق الأمن والرفاه للعالم.

Success story:

Sharjah is a Baby-friendly emirate and the EMR's first Baby-friendly City in the UAE

SHARJAH Supreme Council Member and Ruler of Sharjah His Highness Dr Sheikh Sultan Bin Mohammed Al Qasimi has announced Sharjah is a Baby-friendly emirate and the world's first Baby-friendly City, in 2015, after adopting four standards for being rating as Baby-friendly. This gives the Eastern Mediterranean region leadership in the Baby-friendly initiative and makes it a model for the region and the world.

This is the first time such scheme has been widely utilised in the world, besides the health facilities, the Sharjah Baby Friendly Emirate Campaign (SBFC) has been extended to include nurseries, public places and workplaces. The campaign officially announced that Sharjah is now home to 140 Baby-friendly establishments and facilities, raising the number of mother-friendly workplaces from zero before the campaign to 82 today. The campaign now offers 18 mother and Baby-friendly public places, while Baby-friendly nurseries have gone from zero before the campaign to 28 today and Baby-friendly health facilities from two to 12 due to the campaign.

The Sharjah Emirate Campaign, since its launch in 2011, has resulted in the increase of breastfeeding rates from 18 per cent before the campaign to 40 per cent. Sharjah is close to achieving the global target of reaching 50 per cent by 2025. The rate of formula-fed babies dropped from 67 per cent before the campaign to 36 per cent by the end of 2015. The campaign had as its theme, "*A True Beginning for a Better Future*" with a vision to create a breastfeeding culture, where breastfeeding is valued, protected and considered as the norm, not only within healthcare facilities but also in workplaces, day care centres and nurseries, and public places. A total of 140 government and private bodies received Baby-friendly accreditation during the ceremony.

The government has established guidelines and laws that allow women to get a three month maternity leave, in addition to their one-month annual leave. This change has encouraged many women to join the government sector and advance their career opportunites and share in development and economic build up in the Emirates.

Article III

Status of Breastfeeding in West Asian Countries of the Eastern Mediterranean Region

Azza Abul-Fadl, Reem Tayyem, Samaah AlYassin, Mahmoud Bozo, Ayoub Al-Jawaldeh

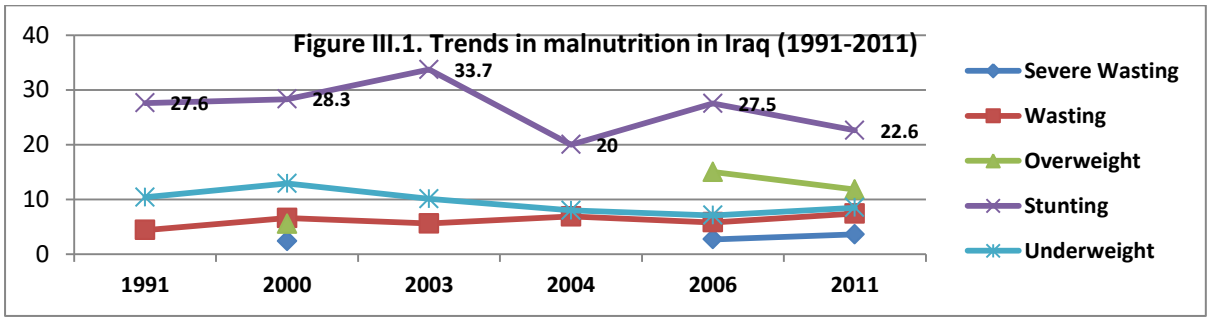
Overview

In this article we review Arab countries of the Eastern Mediterranean Region (EMR) that are located west of the Asian continent. These countries include Iraq, Jordan, Syria, Lebanon and the State of Palestine. The culture of these countries are influenced by the Mediterranean and European countries, and differ from the Gulf and Arabian countries in the south that are more influenced by the Indian and Far East Asian culture. However both the north and south have been mostly influenced by the spread of Islam from the Hejaz region of Saudi Arabia and have shared a long history of commercial and historic holy events that have bonded the region into a united Arab culture that has witnessed the course of holy religions from ages long foreseen ending in our prophet Muhammad (SAS). The teachings of the Quran and preceding Holy Books have strongly supported and emphasized Breastfeeding as a holy practice for fulfillment of a satisfying and complete experience of motherhood, and as a right for every child. It is thereby a responsibility, inherent to such Arabian and Islamic communities, to support breastfeeding.

From the coming review of country status, trends and progress, we will come to realize how important it is to support mothers in this region during this critical period of ongoing conflicts, chronic emergencies and natural disasters. Still the authentic, genuine and resilient nature of women in this region proves them to be mother-soldiers that persevere to make generations worthy of their holy heritage.

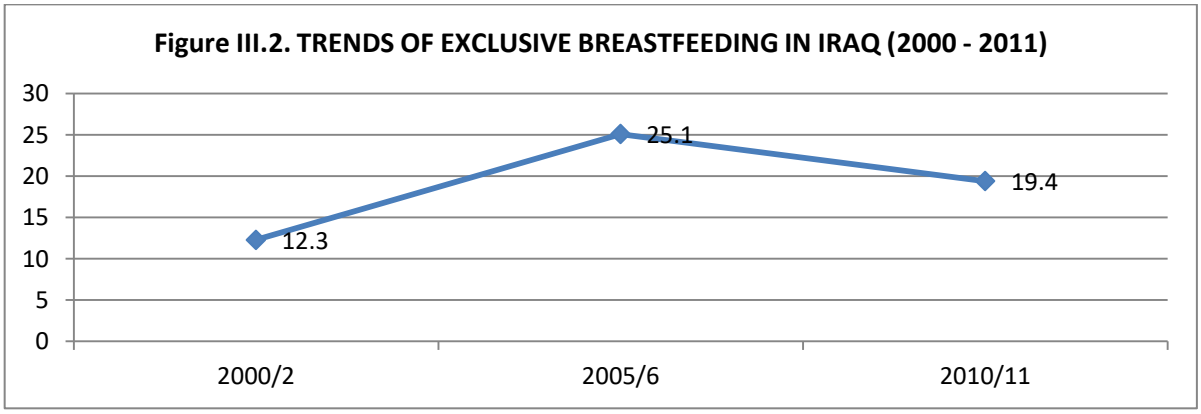
III.1. IRAQ

Trends and Status of Infant and Young Child Nutrition



Stunting remains a persistent burden for the Iraqi child with the rates for stunting in turbulent change from 1991 to 2011 with a high of 33.7% to a low of 20%. This coincides with the steady rise in rates of wasting from 4.4% in 1991 to 7.4% in 2011 and mild changes in undernutrition. However there is an emerging problem of overweight among these children increasing from 5.5% in 2000 to 15% in 2006 and 11.8% in 2011.

Trends and Status of Infant and Young Child Feeding: Breastfeeding in Iraq:



Current status and trends in Exclusive Breastfeeding (EBF)

In 2000 and 2002, before the issuing of the WHO resolution of EBF for six months the status of EBF for 6 months in Iraq was very low (12.3%). After the recommendation came up the country was able to increase its EBF to 25.1% in 2005/2006. The EBF fell again to 19.4% in MICS 2011 being higher in males (20.5%) than females (18.3%) and in rural (18.2%) areas. It decreased steeply with increasing wealth index from 22.6% in WQ1 to 16.4% in WQ5.

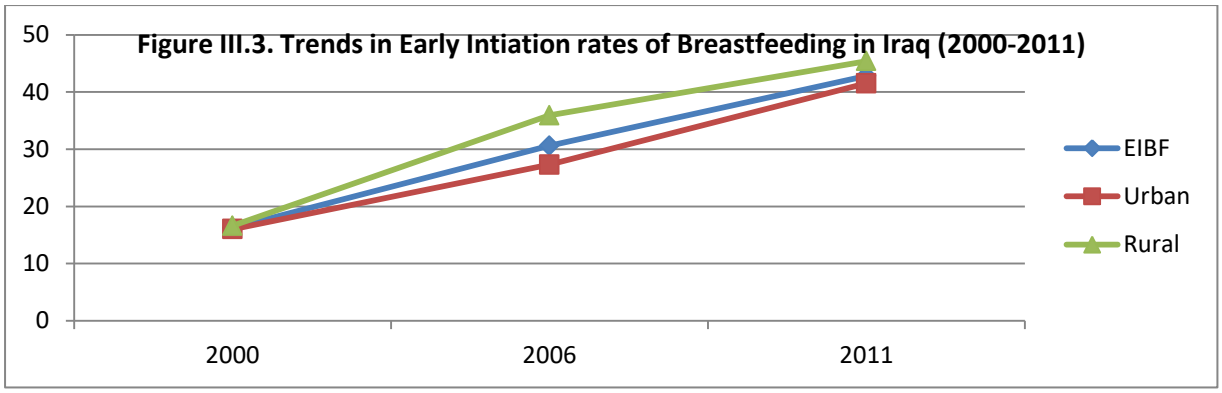
Continued breastfeeding rate (CBF) was 45% at one year decreasing to 27% at two years of age. Breastfeeding was shown higher in central and southern Iraq, highest in the Kurdistan region and in rural than in urban. It is higher with natural childbirth than birth by Cesarean section. CBF decreases with higher education and higher wealth index (UNICEF, 2018).

Baby-Friendly Hospital Practices

A local survey in Iraq reported that 73.1% initiated breastfeeding within one hour of delivery (EIBF). Two thirds of women breastfed on demand (64.6%) (**Abdul Ameer et al., 2008**).

The latest estimate of EIBF by national surveys in 2011 was 42.8%. EIBF showed increasing trends from 16.2% in 2000 and 30.6% in 2006. There were no differences between either sex (16.6% in males and 15.8% in females) in the 2000 national survey. However all surveys in 2000, 2006 and 2011 showed that the rise in EIBF practice was higher in rural areas (16.6%, 35.9% and 45.4%) than in urban areas (16%, 27.3% and 41.5% respectively).

In UNICEF MICS in 2011 EIBF was higher in illiterate mothers (48%) than mothers with primary education (42.4%).



Data on the percent births reported in hospitals designated as Baby-friendly was 4.2 (GNPR2-WHO, 2017). Implementation started in 1993. All the Ten steps were integrated into national policies, strategies and plans. Percent facilities ever designated as Baby-friendly was 55 and percent of facilities designated in the past 5 years were 18. The Baby-friendly Hospital Initiative (BFHI) is evaluated regularly. The presence of efforts in promoting BFHI explains the low and rising EIBF rates and shows that there is a response to implementation of BFHI in Iraq which has reflected in the overall nutritional status and EBF.

Morbidity related to infant feeding practices:

In a study of 1320 infants, in 1989 in Iraq, it was estimated that 60% of hospitalization for diarrhea could be markedly reduced by optimal infant feeding practices: EBF for 6 months and CBF with adequate food intake thereafter (**Mahmood et al., 1989**). The study compared 597 infants hospitalized with diarrhea to 723 healthy children. Infants aged 2–3 months who were partially breastfed had a relative risk of 6.2, and infants who were not breastfed had a relative risk of 36.7. Infants aged 3-4 months who were partially breastfed had a relative risk of 2.9, and infants who were not breastfed had a relative risk of 23.8. The relative risk of hospitalization for older infants deprived of breastfeeding at age 6-7 months was 3.9. Among infants 8-11 months, there was no protective effect of breastfeeding. Also previous breastfeeding had no protective effect on hospitalization for diarrhea for either measure (**Mahmood et al., 1989**).

Common cultural beliefs about breastfeeding

A study of 3413 Iraqi women about breastfeeding knowledge, attitudes and practices showed that the majority (92.9%) believed colostrum was good for their baby. However, knowledge was lacking about the importance of EBF for 6 months of age. Also the art and skills of good positioning and latch-on were defective. The correct way to introduce supplements is defective. Nearly 35% believed that breast milk was not enough for their infants. Rural and less educated women knew less about breastfeeding concepts than more educated urban women but continued breastfeeding longer and introduced supplements later (**Abdul Ameer et al., 2008**)

Knowledge and training of physicians and health workers

Basic knowledge about the main processes of breastfeeding was good (when to start feeding, frequency of feeding, relactation, importance of psychological factors), but there were deficiencies in their ability to deal with some practical problems related to breastfeeding. Only 64% would advise continuation of breastfeeding when a lactating mother discovers that she is pregnant, 38% of them thought a mother's ability to breastfeed was related to breast size and only 66% knew when to start feeding after caesarean section **(Al-Zwaini et al., 2008)**.

Although the previous study showed gaps in knowledge of medical professionals in specific medical issues related to breastfeeding management; yet another study in Baghdad by the Ministry of Health showed that attitudes towards breastfeeding were generally positive, as less than 50% of medics had adequate scores on knowledge questions. Most general practitioners (86.0%) agreed that breastfeeding was the preferred type of feeding compared with only 58.4% of medical students and 57.3% of resident doctors. General practitioners who had attended training courses scored better than those who had not. The main sources of breastfeeding information were community medicine and pediatric courses and the main modes of breastfeeding instruction were lectures and clinical sessions. *The authors concluded* that medical school curricula and residency training do not adequately prepare physicians for their role in breastfeeding promotion. (**Nassaj et al, 2004**).

Complementary Feeding

The timely introduction of solid, semi-solid and soft foods (ISSS) at 6-8 months was compared in both the 2006 and 2011 national Iraqi surveys. The 2011 survey showed that ISSS was 85.1%, being slightly higher in males (85.6%) than females (84.6%) and much higher in urban (87.8%) than rural (75.8%) mothers. Mothers with higher wealth index introduced foods at the recommended time (WQ5=94% and WQ4=90%) compared to mothers of lower WQ1 and WQ2 (80.7% and 82.8% respectively). Also mothers who were highly educated had higher scores for ISSS (89%) compared to mothers with no or primary education (73.9%).

The most recent national studies in Iraq (DHS, 2011), which was revised by UNICEF in 2018, reported that the **Minimum meal frequency (MMF)** was 54.8% and was higher in females (55.2%) (ranging from 52.3% to 57.5%), than males (54.5%) (range= 52.4%-56.5%).

MMF was higher in urban (56.6%) than rural areas (51%); ranging across age groups from 54.5% to 58.8% in urban and from 48.6% to 53.4% among rural children. MMF was lowest between 6 to 11 months (44.1%) and increased to a peak of 66.1% at 20-23 months with a mean of 60.5% over the second year of life (12-23 months). It reached its highest (60.9%) among the richest (WQ5) and it was lowest (50.2%) in the poorest (WQ1) and thus increasing by wealth index. MMF was highest in the secondary and highly educated mothers (58.9%) and lowest in those whose mothers had primary education (54.8%) or no education (47%), indicating that even some education makes a difference in feeding practices in these communities.

The snapshot from UNICEF MICS for 2018 showed that in Iraq the **Minimum dietary diversity (MDD)** was 44.6% at national level. It varied from 49% in the richest to 42% in the poorest. It was lowest at 6-8 months (28%) and increased to 53% at 18-23 months. There were no differences between males and females (45%, 44% respectively). Highly educated mothers and those with secondary education performed better than those with primary or no education (50% and 45% respectively). The practice of MDD was lowest in Diala (29.2%) and Basra (31.6%). MDD was highest in Najaf (69%), Babil (58%) and Sulmaniya (55.9%. In Baghdad it was 42.3%

The Minimum acceptable diet (MAD) was 34% (**UNICEF, 2018**).

The findings indicate that indices of adequate complementary feeding are borderline or low. This is very challenging for Iraq, as already nutritional indices for stunting, wasting and underweight are high. Improvement in feeding practices can reverse trends in underweight and improve overall health, growth and development of Iraqi children.

Maternity support

In Iraq, mothers are entitled to 14 weeks of fully paid maternity leave after delivery. It also guarantees that women return to the same or an equivalent position at the end of their maternity leave. They can also be granted unpaid leave for one year with their employers' consent. There is no paternity leave.

Breast-milk Substitutes and The Code of Marketing during Conflicts

Iraq is one of the countries in the region that is suffering chronic emergencies and whose families are moving from one region to another to camps where living conditions are unsafe and unhygienic. A UNICEF statement released to highlight the importance of EBF urged the country to reject free donation of milk formula as in the following release:

The policy of distributing infant formula free to all infants as part of Iraq's Public Distribution System (PDS) for food rations could be, Wright said, a *"recipe for disaster in current conditions", particularly if prepared with unsafe water. Over one million babies were born in Iraq over the last 12 months, at least 40,000 of them to displaced*

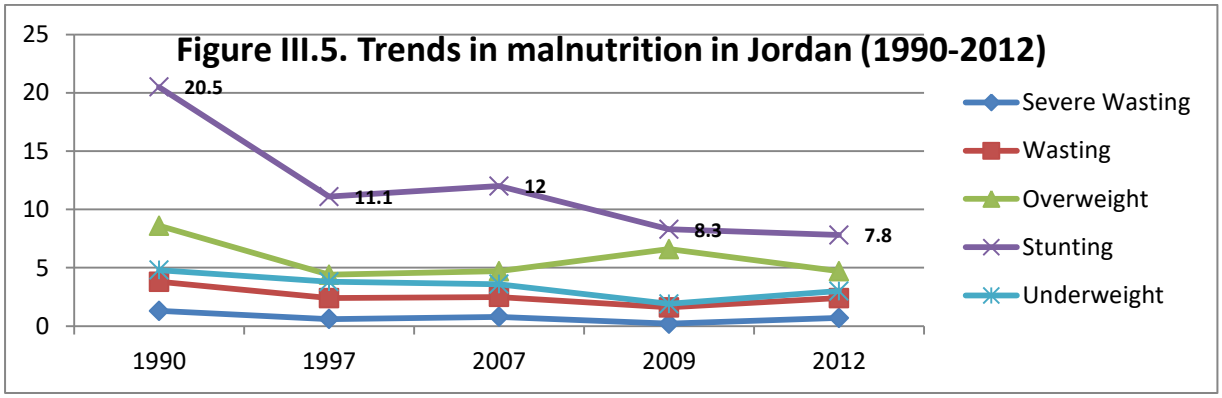
families – many of them living in camps. EBF provides the very best start to a baby's life and costs families nothing (UNICEF, 2007).

"Dehydration resulting from diarrhoea caused by contaminated water and poor sanitation is already Iraq's biggest killer of young children," he said. *"In an unhygienic environment worsened by displacement and violence, exclusive breastfeeding is the best protection that can be given to Iraqi babies."* He stressed that newborns of displaced mothers living in temporary shelters or abandoned buildings are at particularly high risk from diarrhoea.

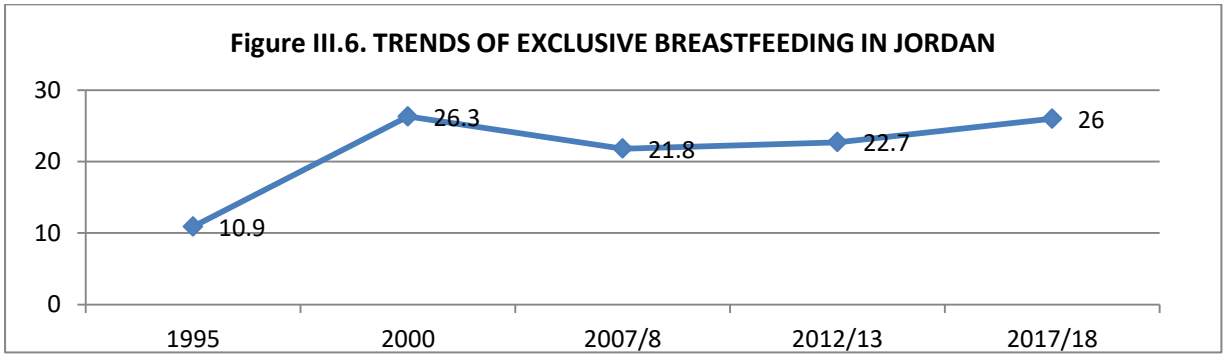
In Najaf Governorate, where up to 50,000 displaced people are being accommodated, many of them in temporary camps, diarrhoea rates are twice the seasonal average. Unsafe water and poor sanitation is to blame for almost 90 per cent of Iraq's diarrhoea cases, hence formula feeding is lethal in such situations (UNICEF, 2007).

III.2. JORDAN

Trends and status of Infant & Young Child Nutrition and Malnutrition



Trends and status of Infant & Young Child Feeding in Jordan: Exclusive breastfeeding



Jordan has recently been upgraded by the World Bank from an Upper Middle Income country to an Upper Income country. There have been marked improvements in nutritional status reflected in low rates of stunting (7.8%).

EBF declines rapidly with age from 43% at 2 months of age to 11% at 4-5 months. EBF under age 6 months is 26%.

Predominant breastfeeding (PBF) 0-5 months is 36%. **Continued breastfeeding (CBF)** for

one year is 36% and for two years is 15% (DHS Jordan, 2019).

Bottle feeding was found common in the 2017/18 survey whereby 57% of those surveyed gave bottle in the day preceding the survey.

A study by Khassawneh et al., in 2006 reported that full breastfeeding was 58.3%, mixed feeding was 30.3% and infant formula feeding 11.4%. Almost one third of the full breastfeeding group continued for a duration of 6-12 months, and almost two thirds continued breastfeeding for more than one year. Hence continuity rates beyond 12 months did not exceed 33% of the population under study (**Khassawneh et al., 2006**).

Factors influencing success in breastfeeding initiation and continuation among women in Jordan was *mode of delivery*. Cesarean delivery interfered with full breastfeeding compared to vaginal delivery (Odds ratio 2.36, 95% CI 1.17, 4.78).

Baby-Friendly Hospital Initiative

EIBF increased from 18.6% in 2012 to 67% in 2017/18 (DHS Jordan, 2019). EIBF showed decreasing trends from the survey conducted in 2007 from 37.2%. There were no differences between either sex (36.8% in males and 37.5% in females in 2007 and 18.1% and 18.9% in 2012). However it was more commonly practiced in in rural areas (39.4% in 2007 and 21.1% in 2012) than in urban areas (36.7% in 2007 and 17.9% in 2012) as shown in figure (III.7).

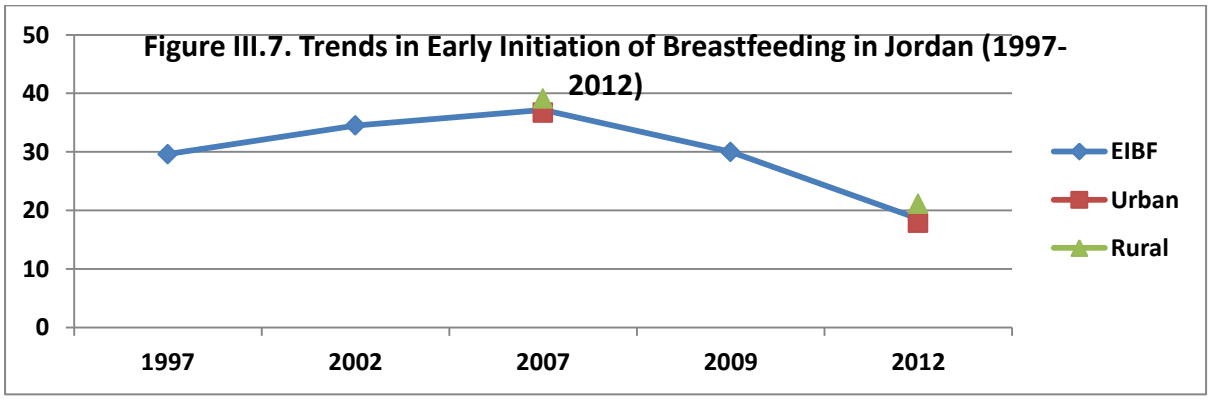


Figure III.7. Trends in Early Initiation of Breastfeeding in Jordan (1997-2012)

BFHI: Until 2016 (GNPR2-WHO, 2017) there were no data reported for facilities designated as Baby-friendly. This explains the low and declining EIBF rates and shows that there is a need to implement BFHI in Jordan in order to improve the EIBF rates.

Complementary Feeding

The Jordan DHS survey in 2012 reported that ISSS at 6-8 months was 85.1%, being slightly higher in males (85.6%) than females (84.6%) and much higher in urban (87.8%) than rural (75.8%) mothers. Mothers of higher wealth quintiles introduced foods at the recommended time (WQ5=94% and WQ4=90%) compared to mothers of WQ1 and WQ2 (80.7% and 82.8% respectively). Also mothers who were highly educated had higher scores for ISSS (89%) compared to mothers with no or primary education (73.9%).

The MAD was 33.3% (range= 30.3 to 36.5 for a sample size of 2603). It was similar in both males and females (33.3 and 33.4 respectively). No differences were shown between urban and rural communities (34.2% and 29.8 respectively).The lowest MAD was in the second half of the first year (20.0%) increasing into the beginning of the second year to 28.2% and reaching a maximum of 42.5% at age 20-23 months. It was highest in families from the highest wealth quintiles (WQ5) (47.8%) and lowest in WQ1 (21.2%). Children of mothers who were not educated had the highest MAD scores (39.5%) compared to mothers who were illiterate or had primary education (16.9% and 25.7%) and mothers who had secondary education (31.2%).

The MMF was 80.9%; it was higher in females (81.4%) than males (80.5%) and in rural (82.2%) than in urban (80.4%). MMF was lowest between 6 to 11 months (56.6%) and increased to a peak of (87%) at 16 to 19 months and declined at 20-23 months (85%) with a mean of 83.9% in the second year of life. It was highest in WQ5 (87.3%) and lowest in WQ2 (74.7%). It was highest in the highly educated (86.9%) and lowest in those whose mothers had primary education (63.5%) or no education (75.5%).

We conducted a trend analysis for MDD, as it was analyzed for both 2007 and 2012, unlike other indicators. We compared MDD indices in 2012 with 2007. There was a significant decline in all values. The MDD was 67.2% in 2007 and decreased to 38.8% in 2012 and 51% in 2017-18. The decrease was similar in both females 66.5% vs. 39.5% in 2012; and in males 68% vs. 38.3% in 2012; and also in urban (67.9% vs. 40.1% in 2012) and more in rural (33.8% vs. 64.1%). MDD was lowest between 6 to 11 months (23.4%) but decreased by one half its value in 2007 (47.6%) but increased to a peak at 20 to 23 months of 50.2% which was still lower than that reached in 2007 (72.1%) in the same age group. It was highest in WQ5 (53% in 2012 vs. 74.1% in 2007) and lowest in WQ1 (27% in 2012 vs. 55% in 2007). It was highest in the highly educated (43.9% vs. 74.6%) and lowest in those whose mothers had primary education or no education (21% vs. 51.6% in 2007).

The national survey in 2017-18 showed that ISSS was 83%. The minimum acceptable diet (MAD) was 23% for all children, 17% for breastfed and 26% for non-breastfed. MDD was 51% for all children (6-23 months) being 40% in breastfed and 58% in non-breastfed, MMF was 62% for all children (6-23 months) being 17% in breastfed and 26% in no breastfed (**DHS Jordan, 2019**).

The explanation for the decline in MAD from 33% in 2012 to 23% in 2017-18 could be due to the effect of influx of Syrian immigrants. It is clear that the low MAD was mainly due to the low MDD, since MAD is a combination of MMF and MDD, as MDD showed a steep decline from 2007 to 2018. Children living in refugee camps have little access to fresh foods and are usually exposed to donations of packed foods of low quality and low diversity. In addition low EBF practices and the increasing reliance on poor quality marketed foods for children increase the magnitude of the problem.

Hence educational messages for improving CF should focus in encouraging mothers to feed their infants a variety of foods that are high in nutritious components as fresh fruits and vegetables rather than readymade marketed baby foods that many poorly educated urban mothers resort to giving as a substitute to home prepared foods.

Mothers of higher education and higher wealth quintiles can be used as models and educators for teaching other mothers adequate CF practices. However the economic situation and pressures from immigrant populations must be taken into perspective and focus on the poor camping conditions should be considered within the context of the country's economic situation.

Maternity support

Employed women are granted 10 weeks of fully paid leave. They are more likely not to practice full breastfeeding compared to unemployed women (odds ratio 3.34, 95% CI 1.60, .98). They had a positive attitude but workplace and short maternity leaves had a negative impact on breastfeeding (**Khassawneh et al., 2006**).

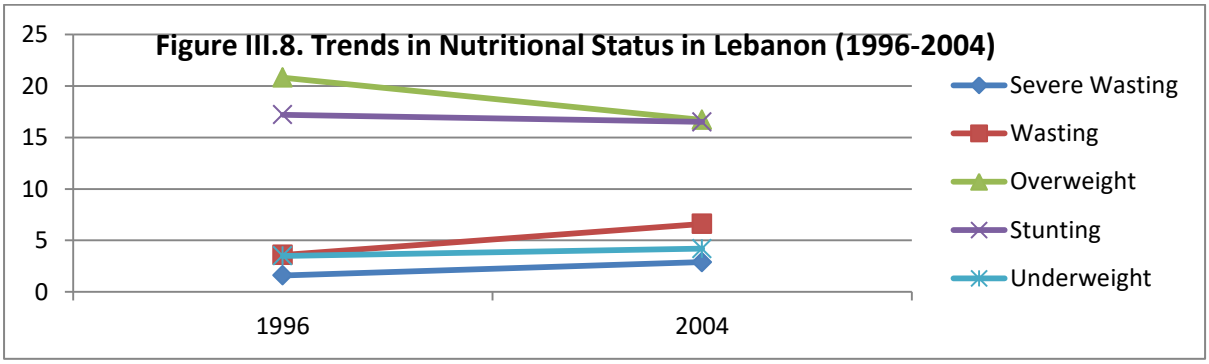
III.3. LEBANON

Country Prophile

In Lebanon under-five mortality rates have been decreasing steadily from 1990 to 2015 from 26 per 1000 to 8 in females and 9 in males per 1000 live births in the year 2015. Neonatal mortality is 5/1000 and infant mortality rate is 7/1000.

Trends in Infant & Young Child Nutritional Status

Recent estimates show that moderate and severe stunting rates have decreased from 17.2% in 1996 to 16.5% in 2004.



Status and Trends in Infant Young Child Feeding in Lebanon

Exclusive breastfeeding (EBF)

Breastfeeding rates in Lebanon are not encouraging. Low EBF rates of 27% have been reported on several occasions in nationwide and local surveys. This is unfortunately accompanied by low EIBF at 41% and result in only one third of women in Lebanon who continue breastfeeding at 9-12 months (35%). (UNICEF MICS, 2015)

Data from a longitudinal nested study in Beirut showed that the overall breastfeeding rate at 8–12 weeks postpartum was 67%. The EBF was 27.4%.

Another study showed that more than half (55.9%) of the mothers report that they initiated breastfeeding their babies within a few hours of birth, 18.3% within half an hour, and 21.2% a few days after birth; 4.6% of the sample did not breastfeed. By six months of age, 41% of these mothers stopped breastfeeding and the remainder by 9 months. Over 13% of the mothers gave their infants other liquids such as water, sweetened water and herbal teas before the 4-month, which undermines the benefits received from breast milk or formula alone. More of the mothers who are EBF at 6 months of life were from rural than urban regions (57.1% versus 30.0% P<0.05) (**Batal, 2010**).

Overall Breastfeeding practices in Lebanon fall short of UNICEF and WHO recommendations as 40% of infants aged one month EBF. At 4-5 months of age 2% are EBF. In fact, over 40% of Lebanese infants are given infant formula in addition to breast milk in the first month of life (**CAS and UNICEF, 2010**).

Baby-friendly Practices

The latest estimate of EIBF in 2004 was 41.3%. Data on percent of births reported in hospitals designated as Baby-friendly was 4.2(GNPR2-WHO, 2017). Implementation started in 1993.

Some steps were integrated into the national policies, strategies and plans. Eighteen percent of the country facilities were ever designated as Baby-friendly and 10 percent of facilities were designated in the past 5 years. The BFHI has not being evaluated until 2017. The paucity of efforts in promoting BFHI explains the declining EIBF rates and shows that there is a need to strengthen implementation of BFHI in Lebanon.

Causes of early discontinuation of breastfeeding

Factors associated with EBF included maternal work (OR=3.92; p-value<0.001), planned pregnancy (OR=2.42, p-value=0.010), intention to breastfeed (OR=3.28; p-value=0.043), source of maternal emotional support (OR = 1.87, p-value=0.039) and the use the postpartum support video, the hotline service or both (OR=2.55, p-value=0.044; OR=3.87, p-value=0.004 and OR=4.13, p-value=0.003).

The authors concluded that the proportion of healthy first-time mothers who exclusively breastfeed in Beirut is extremely low (**Hamade et al., 2014**).

A qualitative study for causes of the low EBF rates in Lebanon through serial interviews over one year identified insufficient milk, fear of weight gain or breast sagging, pain, sleep deprivation, exhaustion, or maternal employment, as reasons for early breastfeeding discontinuation. Women who continued breastfeeding for one year were more determined to succeed and overcome any barrier, relying mostly on family support and proper time management (**Nabulsi et al., 2011)**

Despite their knowledge of its advantages, some mothers expressed fears pertaining to the negative effects of breastfeeding on their breasts and figure (**Nabulsi et al., 2011).**

There were beliefs that maternal illness, stress, drug intake, or even pregnancy would cause *bad* or *harmful* milk. A mother exposed to the stress of violence stated: "*.a frightened or stressed mother's milk is bad.. I stopped breastfeeding at 4 months..I was very frightened then [war] and they told me I should not breastfeed..bad luck: .. (Mother of two who breastfed her first baby for 2 years)".*

Some mothers mentioned it was tiring and painful, indicating lack of support and guidance: "You are told about all the positives of breastfeeding! No one tells you about the severe pain, or the struggle to make her latch on your breast...as you are unable to breastfeed, the baby cries more and more, and you become frustrated!.. it is very distressing! (First-time mother)

It is difficult and tiring..Feeding every 2 hours... you're worried and lost.I.don't know if he is satiated, or if positioning is correct...(Mother of two)

Breastfeeding is tiring, waking up at night! I don't know how mothers do it but it is really very exhausting.. from 10:30 pm till 12:30 am and she barely took a little!...it takes a lot from the mother...all the time it has to be me, no one can replace me except when she's asleep... Yes, sleep deprivation is a barrier! (First-time mother)

I'm tired, not eating well, and don't have time .. My milk decreased. I have to work at home but prefer to take care of her..it is unreasonable to leave her and go eat..My mother in law helps with house work but no one helps with the baby! (First-time mother)

Mastitis, or sore nipples, resulting in painful breastfeeding may force a mother to stop breastfeeding:

I had sore nipples and my breast bled with pieces of nipple coming off. It started soon after breastfeeding initiation and continued thereafter.. I insisted on breastfeeding so that my baby will have good immunity..pain was so severe I cried loudly! My doctor prescribed different creams...finally I became very sad, depressed..it was God's will.. I had twins previously who breastfed for 1 year..this baby!.I am very sad to stop despite my will..(Mother of three; stopped at one month due to lack of appropriate professional advice)

Mother's milk is insufficient

Insufficient milk was reported by 15 mothers who had to supplement their babies with artificial milk: "*I am breastfeeding and supplementing with formula because I feel he is still hungry..he continues to cry so I give the bottle to make him sleep.. bottle is easier...a mother's milk may be insufficient or non-nutritious..(Mother of three)"*

One mother described how routine hospital practices interfered with breastfeeding her hospitalized baby: "*They put him in intensive care for 12 days and was bottle-fed...then they allowed me to breastfeed but my milk decreased and he refused my breast...he got used to the bottle!"*

Perceptions of family and society

Half of the participants were concerned that breastfeeding may cause excessive weight gain or breast sagging. Whereas some were explicit about this personal concern, others stated that it was the perception of society, friends or family:

Many of my friends do not breastfeed.. they're concerned it makes their breasts bigger or causes weight gain..my sister, like my friends, believes it too...they believe there is no difference between breast milk and artificial milk (First-time mother)

The belief that breast milk was insufficient to achieve satiety in the baby, and that a bottle is necessary to ensure satiety and a good night sleep seemed to be transmitted from one generation to another:

My mother did not have milk and none of my siblings were breastfed. My mother-in-law too, none of her four children were breastfed..and my sister also did not have milk to breastfeed her 2 boys.. it is familial.. some families are like that... (Mother of two)

Family perceptions of breastfeeding can influence a mother's decision to breastfeed:

..my husband liked the idea of breastfeeding, but grandparents prefer the bottle because baby remains hungry with breast milk..they think I don't have enough milk because my breasts are small..that my milk is dilute and not nutritious..(Mother of two)

Maternal will and unselfishness

Despite the negative experiences, some women continued breastfeeding for one year. The theme recurring in most interviews with those participants was their preparedness for breastfeeding, and determination to face any difficulty. They showed deep conviction of the importance of breastfeeding and its benefits to mother and baby. Whether they faced pain, sleep deprivation, tiredness, house work or job, they overcame obstacles through proper time management, family support and determination. They often identified maternal will and *unselfishness* as being key factors for successful breastfeeding:

A mother should not think of herself, her comfort or sleep. She needs to think of the baby before herself. I moved my job to a location next to where my baby is so that I can teach for 2 hours and then breastfeed. He never took the bottle. I also minimized my working schedule..(A working mother of 3 children)

Initially, she didn't know how to take the breast. For 1 month, I kept trying without sleeping... I pumped even if I had to throw milk away, so that my breasts continue giving milk. After a month, her mouth grew bigger and she could breastfeed directly..at the end, there has to be a way! (A mother of two children; left her job to be with her children)

A mother needs to be aware that she has a new life now, that the baby will need time and will change her daily routine.. she should be ready to make that sacrifice.. some don't accept the change and feel that breastfeeding is restrictive, so they don't breastfeed. (A mother who breastfed all four children, pumped breast milk for her hospitalized newborn)

Being a working mother should not be a barrier..one can store breast milk or support with additional formula, but not stop breastfeeding completely...".

Family support

On the other hand, family support of a breastfeeding mother is expected in our culture and acts as an important promoter:

Our eastern society encourages breastfeeding because it is nutritious and results in bonding with baby..when family members see you breastfeeding they become happy, and you will be happy too: your mother, sister, husband ..they're all happy because you're breastfeeding (Mother of four)

When I go back to work, I will not be able to breastfeed..you cannot concentrate on the baby 100%..you need to take care of your work, your home or find someone you can leave the baby with. Thanks God I have my mother! (A recently divorced mother of three)

Morbidity and infant feeding practices

A study conducted in Makassed General Hospital in Beirut, Lebanon, between April to September, 2008 for 121 sick infants and 100 healthy children showed that Breastfeeding has a significant protective role against gastroenteritis and lower respiratory tract infection in infancy especially in the early months of life($P<0.05$). Odds ratio revealed that formula fed infants are twice more likely to acquire disease leading to hospitalization than the breastfed and mixed fed group. Any additional protection offered by exclusive breastfeeding versus partial breastfeeding was not found significant (**Ammar and Koleilat, 2010**).

Maternity support

Currently maternity leave in Lebanon is 10 week fully paid leave. Paternity leave of three days post delivery is also given to employed fathers. It was finally published in the Official Gazette Number 17 of April 22 2014 pages 1119 and 1120. (Law 226 modified from the article 38 in the law 1959 for organization of labor).

A cross sectional study of 802 working mothers with babies who were breastfed showed that the average length of breastfeeding was 4.7 months compared to the intended duration of 10.9 months. Duration of maternity leave was not sufficient for 72.8% of women (**Saadé et al., 2010**).

Maternal employment status significantly influences the introduction of solid foods. Mothers in employment outside the home introduce complementary foods at significantly younger ages than did housewives. Mothers who were employed were 1.78 times more likely to introduce solid foods at < age 4 months (**Batal et al., 2010**).

Stopping breastfeeding because of work

A qualitative research (**Nabulsi, 2011**) showed that maternal employment constituted an important barrier for many mothers; especially because maternity leave in Lebanon is only 40 days. The job barrier is best described by this second-time mother and teacher who stopped breastfeeding her first child at two months to return to work. This time, determined to breastfeed for a longer time, she took an additional two-month leave to pump and store her breastmilk for later. Despite having a supportive husband and family, she became very tired, could not cope and finally stopped at three months: *It is very difficult..I'm like a robot! I have a 4-year old who goes to school, plus my work at home, and my job... I stopped breastfeeding because of work...*".

Despite all these working mothers face during breastfeeding, legislations to support the working breastfeeding women in Lebanon are lacking.

Complementary feeding

In a study of 1000 mothers with infants less than 24 months of age, who were recruited from 30 primary health care centers all over the country, the practices of complementary feeding showed that a large number of mothers reported that physicians (42.8%) or their own mothers

(22.0%) influenced their decision to breastfeed. Other sources of influence included: relatives (11.0%), mother-in-law (10.0%), the media (7.0%) and books (7.1%).

The majority of infants in the study received solid foods at or beyond 4 months of age. The proportion of infants introduced to solid foods below the recommended age was not large; the largest proportion were given cereals (9.1%), followed by fruits(7.8%).

However a large number had been given other fluids such as sweetened water and herbal teas. Over 5% of infants were given dairy and desserts below the recommended age. Mothers who initiated breastfeeding early did not differ from those who initiated later with regard to age of weaning. However, those who breastfed longer, i.e. for more than 6 months, introduced cereals at a significantly later age [mean 6.7 (SD 5.5) months] than those who breastfed less than 5 months (mean 5.9). Weaning onto other food groups was similar when comparing the two breastfeeding groups. Mean age of weaning was significantly different for all food groups when analyzed by place of residence. Interestingly, for all food groups, mothers residing in urban areas initiated complementary foods earlier than those in rural areas.

The mean age of weaning to solid foods was also lower for mothers with higher levels of education. Most of the mothers in the study (64.5%) gave their children baby foods every day; only 15.4% said that they never gave their children baby food. More than half the children were eating fruit (55.4%), bread (57.1%) and biscuits (52.0%) every day. Other foods given every day were "kaak" (a kind of cracker-bread that is readily available in Lebanon) (28.5%), desserts (17.8%) and honey (13.3%).

The frequency of consumption of meats was relatively low, with 32.1% of the children who had never been offered beef, 21.8% never had chicken, 61.5% never had lamb, and 50.8% never had fish. In rural versus urban regions, children from urban areas consumed more of the following foods: fruit, potatoes, carrots, peas, spinach, squash, green beans, rice, baby food, beef, chicken, muhalabiyeh (a Lebanese milk-based dessert) and mughli (a rice powder-based dessert. Children residing in rural areas consumed more bulgur (cracked wheat), yogurt and other dairy products (**Batal et al., 2010**).

Protecting Breastfeeding

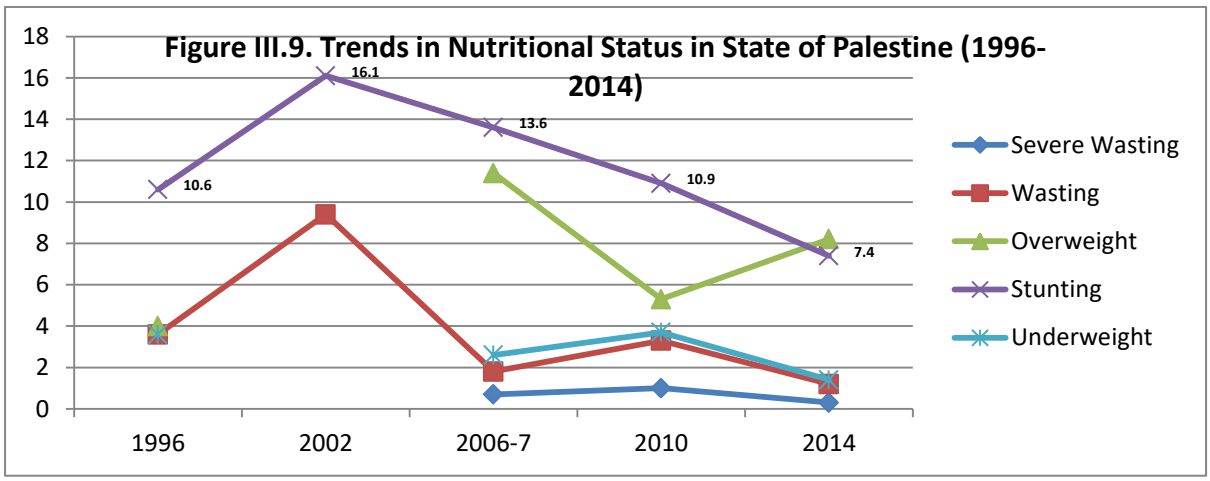
A briefing note was issued by the American University in Beirut (AUB) to shed light on current breastfeeding practices in Lebanon and the implementation of law 47/2008 entitled "Organizing the Marketing of Infant and Young Child Feeding Products and Tools", as well as to clarify problems and offer recommendations. It stated that Lebanon enacted this law in 2008 following a legislative decree first issued in 1983, thus becoming one of seven countries only in the EMR to have adopted all provisions of the International Code for Marketing of Breast Milk Substitutes (also known as the Code), issued by the WHO to regulate the marketing of breast milk substitutes (World Health Organization, 2013).

Law 47/2008 is even considered to be stricter than the Code itself (**Darjani and Berbari, 2015**) given that the marketing is banned for products targeted to infants and young children between 0 to 3 years compared to up to 6 months of age in the Code (Personal communication with Ms. Berbari, 13/07/2015).

On March 31st, 2015, the Ministry of Public Health referred Bellevue Medical Center and Philips Avent to public prosecution following a violation of law 47/2008 that regulates the marketing of breast milk substitutes. The issue received extensive coverage in the most widely read newspapers (The Daily Star, 2015, An-nahar, 2015c, An-nahar, 2015a, An-nahar, 2015b, ALJoumhouriyah, 2015a, ALJoumhouriyah, 2015b, Al-Safir, 2015a, AlSafir, 2015b, Al-Mustaqbal, 2015b, Al-Mustaqbal, 2015a, Al-Akhbar, 2015) as well as television channels (LBCI, 2015).

III.4. STATE OF PALESTINE

Trends and Status of Infant and Young Child Nutritional Status



Trends and Status of Breastfeeding

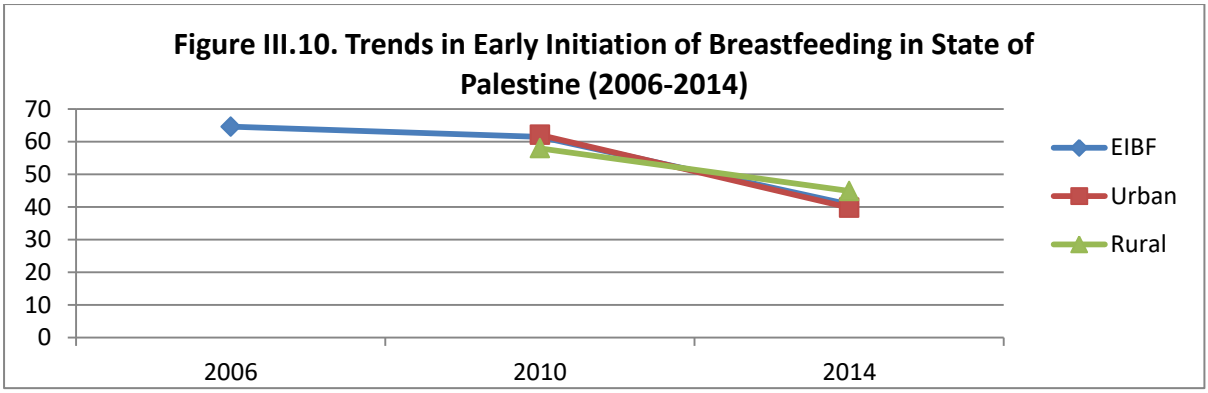
Exclusive breastfeeding (EBF) rate (up to 6 months of age) increased from 24.8% in 2006 to 28.7% in 2010 to the most recent status of 38.1% in 2014.

EBF was similar in both males and females (38.4% and 37.8% respectively). It was higher in rural than in urban communities (40.7 % and 37.7% respectively). It decreased progressively by wealth (WQ1= 37.2 and WQ5=41.8). It also decreased by level of education being 43.2 % in illiterate mothers and mothers with primary education and 26.5 % among mothers with secondary and higher education (UNICEF-MICS, 2014).

Predominant breastfeeding (PBF) increased from 48.6% in 2010 to 49.5% in 2014. It was similar in both males and females (49.8% and 49.1% respectively). It was higher in rural (52.2%) than in urban communities (49.5%). It was minimally affected by wealth (WQ1=49.2% vs. WQ5= 50%). It also decreased by level of education from 56.4% in illiterate mothers and mothers with primary education and 47.3% among mothers with higher education (UNICEF, 2014).

Baby-friendly Practices

Initiation of breastfeeding within the first hour (EIBF) has decreased from 64.6% and 61.5% in 2010 in 2006 to 40.8% (UNICEF, 2014) in the State of Palestine. EIBF was higher in rural (58 in 2006 and 44.9 in 2014) than in urban (62.1 in 2006 and 39.8 in 2014). It was not influenced by wealth index. It was higher among women with higher education (42.6%) than among women with primary education (40.1%) and secondary education (39.4%). However there is no mention of indicators about initiation through skin-to-skin or the duration of skin to skin contact before the first breastfeed. There are no designated Baby-friendly Hospitals in the State of Palestine.



Breastfeeding continuity

CBF at 12-15 months is 52.9% and 11.5% at 20-23 months (MICS, 2014). It was 13.2% in 2011 indicating that it has not changed during this period. Males tend to have higher continuity rates (14.1%) than females (8.6%). Women in rural areas breastfeed longer (17.8%) than urban areas (9.4%).

CBF into the second year (12 to 23 months) increased very little from 30.7% in 2006 to 31.7% in 2014. It was higher in males than in females (34.7% and 27.4% respectively). It was also higher in rural than in urban communities (30.3% and 33.3% respectively). CBF into the second year decreased progressively by increasing wealth index (WQ1= 32.5% to WQ5= 28.7%) and by level of education.

Complementary Feeding

There was an increase in ISSS at 6-8 months from 78.2% in 2010 to 89.6% in 2014. The ISSS was higher in males 90.6% and lower in females 88.6% and in Urban (90.1%) and lower in rural (88.1%). ISSS increased with increasing wealth index from 88.3% in WQ1and 88.1% in WQ5 progressively. ISSS increased with level of education from 88.4% in the illiterate and primary education to 90.0% children of women with secondary and higher education (DHS, 2014).

The minimum meal frequency (MMF):

MMF increased from 58.4% in 2010 to 78.8% in 2014. It was similar in males (78.9%) and females (78.7%). It was lower in urban (78.2%) than in rural (81.5%) areas. MMF was lowest between 6 to 11 months (72.6%) and increased to a peak of (84.5%) at 20-23 months. MMF increased by wealth quintile from 74% in WQ1 to 84% in WQ5. MMF was higher in the highly educated (81%) and lower in those whose mothers had primary education or no education (73%).

The minimum dietary diversity (MDD) is percent of children aged 6 to 23 months receiving 5-8 of the recommended 10 food groups. National levels decreased from 50.3% in 2010 to 24% in 2014. It was higher in males (52.1%) than females (48.4%) and in urban (47.6%) than in rural (61.3%). MDD was lowest between 6 to 11 months (34.3%) and increased to a peak of (64.3.%) at 20 to 23 months. It increased with wealth from 38.6% in WQ1 and 64.3% in WQ5. It was highest in the highly educated (54.3%) and lowest in those whose mothers had primary education or no education (39.9%).

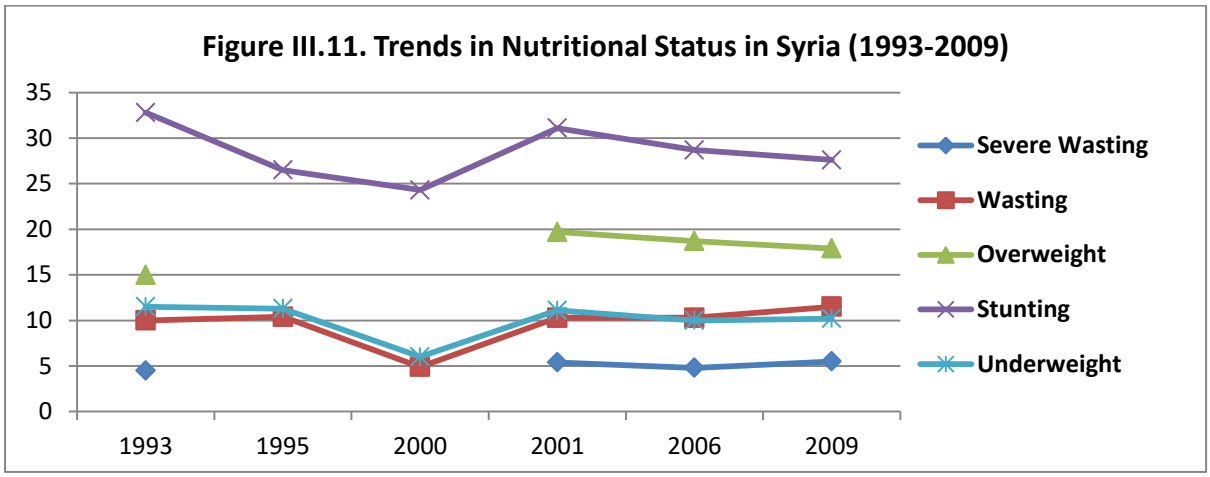
The minimum acceptable diet (MAD) decreased from 39% in 2010 to 14.7% in 2014. It was similar in both males and females (41% and 36.9% respectively). MAD was higher in urban (37.5%) than rural communities (46.4%). MAD increased by age from 28.9% in second half of the first year increasing to 47% at 12-15 months of age decreasing over the second year to 42.4% at 20-23 months. MAD increased with wealth from 28.6% in WQ1 to 53.9% in WQ5. MAD increased with education from 29.3% in mothers who were illiterate or had primary education to 42.7% in mothers with secondary or higher education.

Conclusions: Overall dietary practices of mothers and continued breastfeeding are

declining in the State of Palestine over the past decade which calls for action to improve such practices guided by indices which show good practices as higher education and improving poverty status. The road to optimal infant and young child feeding is paved by ways to achieve the SDGs in these countries.

III.5 SYRIAN ARAB REPUBLIC

Trends and Status of Infant and Young Child Nutritional Status



Malnutrition in Syria has remained a problem across the two decades that preceded the current one. Unfortunately there are no global data for the past decade (2009-2019) due to the persistent conflicts and immigration that has torn the country apart. However the trends show that problems of the Syrians are those of stunting and overweight, a feature that has emerged in many countries that have been driven away from breastfeeding and into feeding industrial products that have invaded markets all over the world. The highest stunting rates were reported in 1993 (32.9%) and ten years later in 2001 was 31.1%. This indicates that this is a chronic ongoing problem and correlates with the ongoing low rates of breastfeeding continuity and low EBF and early introduction of foods. Overweight is another problem that was highest in 2001 (19.7%) and has remained high in the surveys of 2006 and 2009 (18.7% and 17.9% respectively). Wasting and severe wasting have remained the same throughout the decades. Underweight decreased temporarily after the mid-decade of the 1990s but rose again with the turn of the new millennium.

Trends and Status of Infant and Young Child Feeding in Syria: Breastfeeding

EBF rate has increased from 28.5% in 2006 to 42.6% in 2011. Predominant breastfeeding (PBF) is 58.9% in Syria.

Less than one quarter of males and one third females are EBF (26.9% and 30.3% respectively). EBF is somewhat lower in urban than rural communities, but still very similar (27.3% and 29.8% respectively). Almost one half of babies are EBF in the first months of life (47.2%) but this decreases significantly to one quarter in the second and third month of life and to one fifth (19.3%) by 4-5 months of age.

On the other hand PBF is the same in both males and females (58.5% and 59.4% respectively). Almost two thirds of women in rural areas PBF (63.9%) compared to over one

half of mothers living in urban areas (54.4%). Three quarters of children in the first month of life PBF (75.4%) but PBF decreases to 58.6 in the second to the third month of life and to one half by 4-5 months (50.6%).

EBF decreases progressively by increasing wealth from one third in WQ1 (35.1%) to one quarter in WQ5 (23.2%). It also decreases by level of education being 31.4% in illiterate mothers and 29.1% among mothers with primary education decreasing to 27.7% in mothers with secondary education and 22.2% in those with higher education. Hence one third of mothers with lower levels of education versus one quarter in those with higher education exclusively breastfeed. PBF is double EBF, but follows the same pattern being highest in the lowest WQ (69.8%) and lowest in the highest WQ (48.6%). Almost two thirds of illiterate mothers and those with primary education tend to PBF (61.7% and 62.1%) versus one half of mothers with secondary and higher education (55.6% and 50.6% respectively).

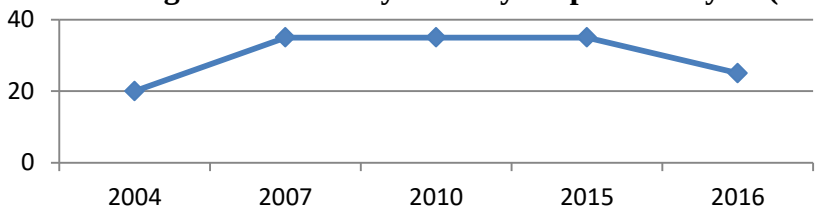
The interpretation of the differences in infant feeding patterns in Syria among mothers could be attributed to different factors. Syrian mothers with higher education are usually in higher wealth quintiles and are exposed to the pressures of work or study associated with the urban life. They are also exposed to marketing of industrial baby foods in the city. This makes their EBF low and ISSS inadequate predisposing them to obesity and early cessation of breastfeeding. While mothers of lower education are not doing paid work and live in rural areas away from the effects of marketing of industrial products for feeding babies and have lower incomes and are thereby not inclined to purchase marketed baby foods. Hence they breastfeed longer but are more inclined to offer herbal drinks as shown by their higher PBF.

Baby-friendly Practices in Syria

EIBF, ideally within the first hour of birth, showed an increasing trend before the break of conflicts, from 32.4% in 2006 to 45.5% in 2009. Rural areas (33.1%) were higher than urban areas (31.8%). Increasing wealth index was associated with some decrease in EIBF from 33.6% in WQ1 to 30.5% in WQ5, but decreasing by level of education from 35.5% in the illiterate to 32.9% in those with primary education, to 31.6% in those with secondary education and 29% in those with higher or tertiary education. EIBF seems to be more influenced by the type of birth and birthing facility. The illiterate mothers usually deliver at home which explains the higher EIBF rates, while the mothers with higher education usually deliver in private facilities which carry out cesarean deliveries or give sedation to the mothers and thus delaying the first breastfeed, which explains the lower EIBF in this group.

The BFHI was started in 2016. All the Ten steps are integrated in the quality standards but not in the policies, strategies or plans. There is no evaluation for BFHI. The Baby-friendly Hospitals have increased from 20 in 2004 to 35 in 2007, 2010 and 2015 but decreased to 25 in 2016.

Figure III.11. Baby-friendly hospitals in Syria (2004-2016)



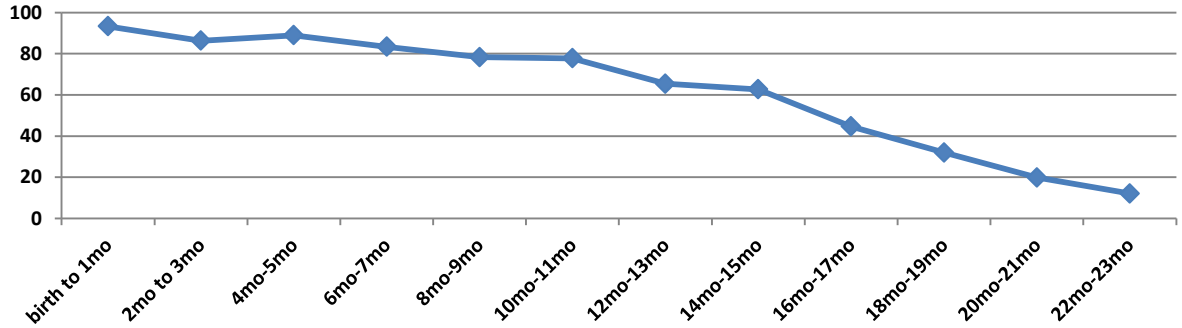
Breastfeeding continuity

Over the first two years of life (0-23 months) breastfeeding continuity was 64.6% and remains

high throughout the first year then declines more steeply. At 12 to 15 months CBF was 63.9% and at 22-23 months it was 12.1%. This steep decline correlates with the adherence of these communities to religious teachings. But the irony is that in a country where over 90% are Moslems only 12% are actually abiding by the recommendations coming from their religion, which indicates how misinformation and pressures from marketing can dismantle practices of faith.

CBF is similar among both males and females (64.5% and 64.8% respectively). Two thirds of both urban and rural mothers continue breastfeeding for two years. CBF is slightly higher in rural (66.2%) vs. urban areas (63.1%).

Figure III.12. Breastfeeding continuity for two years (0-23) in Syria



By wealth: CBF showed minimal differences across the wealth quintiles it was mostly highest in the lowest wealth quintile WQ1=72.2%) but then ranged from 62.8% WQ2 to 63.4% in WQ4 to a low of 60.2% in WQ5.

By level of education: CBF decreased from a score of 75% in the illiterate to 56.7% in those with secondary education and 58% to those with higher education. There was a difference between illiterate and primary education score (69.8%) vs. secondary and higher education scored 58.6%. The positive effect of education on breastfeeding comes by the increasing level of quality of education as shown by the difference between secondary and higher education, but not in education per se.

Complementary Feeding

Introduction of solids, semi-solid and soft foods (ISSS) at 6-8 months was 43.8% in 2006. The ISSS was similar in both males 43.4% and females 44.3%. ISSS practice was slightly more timely in rural areas 45.3% than in Urban areas 42.2%. ISSS increased with increasing wealth index from 31.5% in WQ1 and 49.5% in WQ2 to 52% in WQ4 and 43.3 inWQ5. ISSS rose also with level of education from 28.6% in the illiterate to 41.3% in those with primary education and 50.8% and 46.3% in those with secondary and higher education respectively according to the UNICEF MICS survey of 2006.

Maternity protection in Syria

Working breastfeeding women are entitled to 75 days of fully (100%) paid maternity leave. The leave is paid by the employer (ILO, 2012).

II.6 Summary and Conclusions

The West Asian countries of the EMR include Iraq, Jordan, Lebanon, State of Palestine and Syria. These countries live amidst devastating conflicts that have infested this region for decades and where the mother and child have been the helpless victims to this very day.

In Iraq, trends in malnutrition are decreasing, stunting is 22.6%. EBF has decreased to 19.4% in 2011 and was lowest in those with high wealth index. EIBF was 42.8% and was higher in illiterate mothers (48%). There are Baby-friendly hospitals but progress is slow. CBF to two years in less than 5%. ISSS at 6-8 months is 85.1%. MMF was 76% and MDD was 45% resulting in a MAD of 34%. Maternity leave is 14 weeks and is fully paid.

Jordan has recently been upgraded by the World Bank from an Upper Middle income country to an Upper Income country. Stunting has decreased steeply to 7.8%. EBF are reported as 22.7% in 2012/13. EIBF in 2012 was 18.6%. CBF into the second year does not exceed one third of the population. ISSS is 85.6% and MAD is 33.3% mainly due to low MDD which has shown a recent decline by almost one half between 2007 and 2012 from 67.2% to 38.8%. Maternity leave is fully paid for 10 weeks.

In Lebanon EBF rates are low at 27%. EBF at 4-5 months is 2%. EIBF is 41%. CBF for 12 months is 39%. They have 18% of their maternity facilities that were ever designated as Baby-friendly hospitals and 10% in the past 10 years. Mothers, especially in urban areas, who were not breastfeeding, tend to introduce foods earlier than 4 months in Lebanon. Intake of meats is low, but fruits and cereals are high. Women are entitled to 10 weeks fully paid maternity leave.

In the State of Palestine stunting has decreased to 7.4% in 2014. EBF is 38.1% in 2014. PBF is 49.5%. EIBF is 40.8% and is higher in rural areas but not influenced by wealth index. CBF into the second year is 31.7% but reached 11.5% at 20-23 months. ISSS is 78.2%, MMF is 58.4% and MDD is 24% so that MAD (14.7%) is far below the recommended international level. There are no designated BFH. Working mothers are entitled to 10 weeks paid maternity leave.

In Syria recent data is lacking since the last PAPFAM survey in 2009. It is expected that the rate of stunting of 27.9% will double by the effect of political instability. EBF was 42.6% and PBF 58.9%, while breastfeeding continuity at 12 to 15 months was 63.9% but at 22-23 months fell steeply to 12.1%. EIBF was 32.4% in 2006 and 45.5% in 2009. The Baby-friendly hospitals have increased from 20 in 2004 to 35 in 2007, 2010 and 2015 but decreased to 25 in 2016. Working mothers are entitled to 10 weeks paid maternity leave.

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المقال الثالث: أنماط الرضاعة الطبيعية فى بلدان غرب أسيا التابعة لإقليم شرق المتوسط

الملخص و الاستنتاجات

تتضمن **بلدان غرب قارة أسيا** التابعة لإقليم شرق المتوسط لمنظمة الصحة العالمية العراق والأردن ولبنان و دولة فلسطين وسوريا . إن بلدان هذه المنطقة تشهد العديد من الصراعات والطوارئ المزمنة التى تهدد صحة و تغذية الأمهات والأطفال ولذا يتطلب هذا المزيد من والدراسة لايجاد حلول واستراتيجيات لحماية هذه الفئات الهامة بالمجتمع.

في **العراق** أظهرت مؤشرات التغذية تحسن في بعد فترة طويلة من التدني، فهناك 22.6 في المائة من الأطفال تعانى من التقزم . كما أن هناك برنامج للمستشفيات الصديقة للطفل فى العراق ولكن 42.8 في المائة يبدأن الإرضاع فى الساعة الأولى بعد الولادة و نسبة الأمهات اللاتي تمارسن الرضاعة الطبيعية المطلقة لمدة ستة أشهر إلى 19.4 في المائة وهناك 27 في المائة من الأمهات يواصلن الرضاعة الطبيعية لعامين . وهذه الممارسات تتأثر سلبياً مع زيادة الدخل والتعليم. أما بالنسبة للأغذية التكميلية فإن 85.1 في المائة يدخلن الوجبات عند عمر6 إلى 8 شهور ولكن مؤشر الحد الأدني للنظام الغذائى المقبول بلغ 34 في المائة على الرغم من أن مؤشرالحد الأدنى لتنوع الغذاء كان 76 في المائة. كما تمنح الأمهات العاملات 10 أسابيع أجازة مدفوعة الأجر بعد الولادة.

أما فى **المملكة الأردنية** فقد ارتقت الدولة من مستوى الدول المتوسطة الدخل إلى مجموعة الدول عالية الدخل حسب تصنيف منظمة البنك الدولى. وقد انخفضت نسبة التقزم فى الأطفال إلى 7.8 في المائة . كما أن ممارسة الرضاعة الطبيعية المطلقة لمدة 6 أشهر 22.7 في المائة وقد يرجع هذا إلى التأخر فى بداية الإرضاع من الثدي فى الساعة الأولى بعد الولادة (18.6%) ، ويلازم ذلك انخفاض فى مؤشر مواصلة الرضاعة الطبيعية لعامين والذى يصل إلى أقل من الثلث . أما بالنسبة للأغذية التكميلية فقد بلغ معدل النظام الغذائي المقبول 33.3 في المائة وذلك بسبب انخفاض فى الحد الأدنى لتنوع الغذاء. وتمنح الأمهات العاملات فى الأردن 10 أسابيع أجازة مدفوعة الأجر بعد الولادة.

فى **لبنان** تبلغ ممارسة الرضاعة الطبيعية المطلقة بوجه عام 27 في المائة ولكن هناك 2 في المائة فقط من الأطفال يواصلون الرضاعة المطلقة عند 4 إلى 5 شهور من عمر الطفل على الرغم من أن 41 في المائة من الأمهات تبدأن بالرضاعة الطبيعية مبكراً ، ويصاحب هذا انخفاض في مواصلة الرضاعة الطبيعية بنسبة 39 في المائة فى السنة الأولى من العمر. وتدخل الأمهات الأغذية التكميلية فى وقت مبكر وتكون من الفاكهة والحبوب مع قليل من اللحوم. وهناك 10 في المائة من المستشفيات قد تم اعتمادها كمستشفى صديق الطفل خلال العقد السابق. وتمنح الأمهات العاملات 10 أسابيع أجازة أمومة مدفوعة الأجر بالكامل.

فى **فلسطين** قد تحسنت مؤشرات التغذية إذ انخفض التقزم إلى 7.4 في المائة فى 2014 وقد يرجع ذلك إلى ارتفاع في معدلات ممارسة الرضاعة المطلقة من 28.7 في المائة فى 2006 إلى 38.1 في المائة فى 2014 وارتفاع نسبة الرضاعة الغالبة إلى 49.5 في المائة ولكن مواصلة الرضاعة الطبيعية لعام تبلغ 31.7 في المائة ولعامين تبلغ 11.5 في المائة أى عند 20-23 شهر من العمر . ولا توجد مستشفيات معتمدة كصديقة للطفل كما أن نسبة البداية المبكرة بالإرضاع خلال الساعة الأولى بعد الولادة تبلغ 40.8 في المائة.

فى **سوريا** الشقيقة التى تعانى من النزاعات فإن الدراسات التى تمت فى 2006 و2009 أظهرت أن الرضاعة الطبيعية المطلقة تبلغ 42.6 في المائة والرضاعة الطبيعية الغالبة كانت النمط السائد بنسبة 58.9 في المائة كما واصلت 63.9 في المائة من الأمهات الارضاع لنهاية السنة الأولى ولكن انخفض ذلك إلى 12.1 في المائة فى الشهور الأخيرة من السنة الثانية. كما أن حوإلى نصف الأطفال تبدأ الرضاعة فى الساعة الأولى . وقد انخفضت عدد المستشفيات الصديقة للطفل من 35 مستشفى فى عام 2007 إلى 25 فى عام 2016. كما تمنح الأم العاملة 10 أسابيع مدفوعة الأجر بعد الولادة لرعاية طفلها.

إن هذه الدول تستحق التقدير والعرفان لمجهودات الوزارات على الرغم مما تمر به من أعاصير سياسية.

Article IV

Status of Breastfeeding in Arabian Peninsula and Gulf Countries of the Eastern Mediterranean Region

Ayoub Al-Jawaldeh, Azza M. Abul-Fadl, Mona Al-Sumaie M, AlBandri AbuNyayan, Samia Al Ghannami

Overview:

These countries include Bahrain, Qatar, Kuwait, United Arab Emirates (UAE), Sultanate of Oman and Yemen. They are mostly high income countries that have shared common values and traditions that were different from the rest of the region. They have been influenced by the immigrants from the Far East Asia and many of them have Indian, Pakistani or Iranian origins. They retain the common language and Islamic traditions in their culture. Their economic growth and development relied mostly on the discovery of oil in their region and they became one of the major exporters in the region. However, they have been able to build on their economic growth by using other assets as religious tourism and growth in industry and agriculture to expand their resources for surviving in their competition with other high income countries. The poorest of these countries is Yemen that is facing severe and detrimental emergencies from ongoing and escalating conflicts.

The major nutritional problem in this region is overweight and obesity. The prevalence of obesity is 38% in Kuwait, 35% in Saudi Arabia and Qatar, 32% in UAE, 30% in Bahrain and 28% in Oman. This is associated with a high prevalence of hypertension, pre-diabetes, metabolic abnormalities, and cardiovascular risk. Low exclusive breastfeeding rates, shortened duration of breastfeeding with high rates of early introduction of formula and feeding marketed baby foods predominate the infant feeding patterns and are linked with obesity and its related health consequences (***Al-Kohji et al., 2012, Radwan et al., 2013, Farrag et al., 2017, Hendaus et al., 2018***).

IV.1. Bahrain

Background

Bahrain is an island in the gulf with a population of around one and half million people. Under-five mortality rate is 6 per thousand live births. Prevalence of moderate and severe stunting is 14%. All mothers are exposed to antenatal care and all mothers giving birth are attended by professional birth attendants. Gross enrollment in preprimary education is 53%. Proportion of out of school children from primary education is 14%, net attendance in secondary education is 81% and literacy rate of the 15 to 24 years of age is 98%. The proportion of women who achieve secondary education was 74.4% in 2010.

Trends in Infant & Young Child Nutritional Status

Nutritional status in Bahrain: The nutritional status of Bahrini children in 1989 showed that 13.9% of children under-five years of age were stunted. Underweight was 6.3%, wasting was 6.8% and overweight was 7.6%. In 1995 according to the WHO growth standards, 7.6% of children under-five years of age were underweight, 13.6% were stunted and 6.6% were wasted. Using the National Child Health Standards (NCHS), stunting was estimated as 10%, underweight (9%) and wasting (5%). Anemia in children under two years was 25%.

Trends in Infant & Young Child Feeding:

Exclusive breastfeeding

Only one third of children in Bahrain are exclusively breastfed (0-5 months) according to the national survey conducted in 1995 (34%). No data has been reported since tis survey.

Continued breastfeeding (CBF) for two years is 41%.

Baby-friendly Hospital Practices

The data for early initiation of breastfeeding in Bahrain comes from a local study conducted in 2000 that showed that 39.8% of mothers initiated breastfeeding before one hour and 39.3% within the first 6 hours of delivery and another 20% after 6 hours. Prelacteals and supplements were given to 39% of newborns. Milks and formula were introduced at a mean age of 1.3±0.7 months by high educated mothers and at 2.2±2.1 months by mothers with some education and 2.2±2.1 months by mothers with low levels of education (**Musaiger and AbdulKhalek, 2000)**.

In 2002 six hospitals out of a total of 28 were certified as Baby-friendly hospitals (UNICEF, 2011).

Complementary feeding

Timely complementary feeding with continued breastfeeding (ISSS) at 6-8 months of age is 65%.

The **International Code of Marketing of Breastmilk Substitutes (ICMBMS) and subsequent relevant World health Assembly (WHA) resolutions.**

According to the IBFAN report of the situation of IYCF in Bahrain (IBFAN, 2011) in 2006 the Breastfeeding committee in Bahrain monitors the Code through the national Decree no. 4 issued in 1995 which covers all the articles of the International Code of marketing of breastmilk substitutes

Maternity Support:

Although women in Bahrain are generally more publicly active than in other Arab countries and one-quarter have jobs, still maternity leave in Bahrain is only 45 days with full payment. This interferes with continuity of breastfeeding despite the enlightened status of women in Bahrain and their unique identity among other women of the GCC countries.

Most Bahraini women are highly educated, even more than men and they are well represented in all of the major professions, women's societies, and women's organizations (mostly public rather than private). They have the right to vote and 18% are represented in the parliament. They achieve careers in the fields of education, medicine, nursing practice and other health-related jobs, financing, clerical jobs, light manufacturing and banking among others. The women of Bahrain became "enfranchised women" after the revisions in the constitution of Bahrain were ratified in 2002.

Maternity leave is paid by the employer. In accordance with the ILO, women on maternity leave cannot be dismissed while on maternity leave. They should return to the same position they were in before going away for maternity leave.

IV.2. KUWAIT

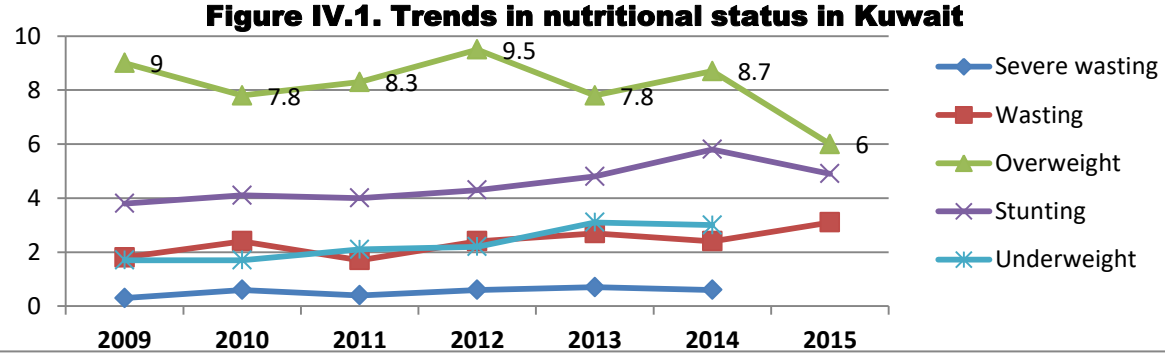
Country Prophile

Census population in Kuwait is 4,184 in 2016. It is classified by the World Bank as one of six countries of the higher economies. Hence it is a target for the profit seeking infant milk formula companies and thereby a victim of their aggressive marketing practices despite all the control efforts of the government.

Trends in Infant and Young Child Nutritional Status

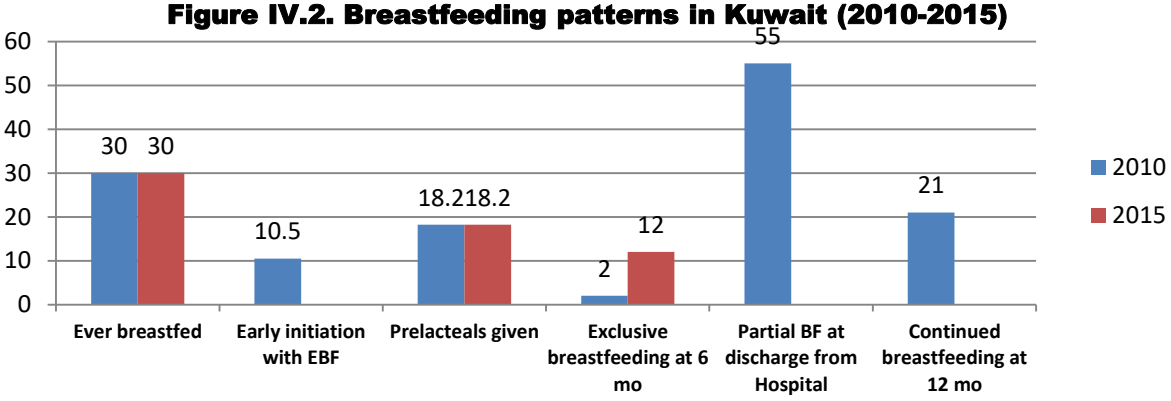
Kuwait has low rates for stunting and wasting in the region (4.9% and 3.1% respectively) and the lowest rate for maternal mortality ratio (4/100,000) and under-five mortality rates (8.4/1000 live births), IMR and NMR (7 and 3/1000 live births) which reflects the efficiency of MCH services. However overweight and obesity are a particular problem among Kuwaiti children under-five years of age (6% and 2.2%) although lower than the average estimate of the region. Still overweight and obesity are considerably high in adults (75.4% and 39.7%). It is the second highest estimate just after Qatar. It also has the second highest percent raised blood glucose for adults (18+ years) in the region (20.1%), coming only after Qatar (23%). These alarming risk factors for noncommunicable disease (NCD) can be closely linked to the low exclusive breastfeeding and continuity rates shown in figure (IV.2) (**WHO, 2017 and UNICEF, 2016**).

Figure IV.1. Trends in nutritional status in Kuwait



Trends and status of Exclusive breastfeeding in Kuwait

Figure IV.2. Breastfeeding patterns in Kuwait (2010-2015)



According to the latest UNICEF MICS surveys EBF in Kuwait is 12% and continued breastfeeding at 12-15 months is 21%.

Only 30% of mothers in Kuwait are fully breastfeeding ***(Dashti, et al., 2010).***

The majority 55.4% of mothers were shown to delay their first attempt to breastfeed until 24 hours or more after delivery. However, 92.5% of mothers initiate breastfeeding before discharge from hospital. Delayed initiation of breastfeeding was shown to contribute to early discontinuation of breastfeeding among Kuwaiti mothers ***(Nassar et al., 2014)***.

The majority of mothers in Kuwait are initially partially breastfeeding (55%) ***(Dashti, et al., 2010)***.

Prelacteal feeding has been the norm (81.8%) and less than 1 in 5 infants (18.2%) received colostrum as their first feed ***(Dashti, et al., 2010)***.

Only 10.5% of infants were exclusively breastfed since birth, the remainder of the breastfed infants had received either prelacteal or supplementary infant formula feeds at some time during their hospital stay ***(Dashti, et al., 2010)***.

At six months, 39% of all infants were receiving some breast milk and only 2% of infants had been fully breastfed to 26 weeks ***(Dashti, et al., 2010)***.

According to the findings of the Kuwait WBTi assessment report for IYCF breastfeeding initiation is 12.5%, exclusive breastfeeding for 6 months was 19.5%, the median duration of breastfeeding is 3.5 months, bottle feeding rate was 55.1% and timely complementary feeding 81.8% ***(MoH and IBFAN, 2015)***.

Complementary feeding

By six months 100% of women have introduced foods to their babies, 30.4% received complementary foods before 17 weeks of age. Women born in other Arab countries were less likely to introduce complementary foods before 17 weeks compared to local Kuwaiti women. Formula fed infants at 6 weeks postpartum are less likely to be introduced foods before 17 weeks compared to breastfeeding babies (**Scott et al, 2015**).

Baby-friendly Practices

There is one designated Baby-friendly hospital (BFH) in Kuwait. Adan Hospital was recognized as Baby-friendly by WHO and UNICEF in February 14, 2014 and will be due for re-designation after 2 years. It was the first BFH Kuwait (http://adan.alyatalat.com/breastfeeding).

Challenges to breastfeeding

Mothers who attempted to breastfeed were positively associated with paternal support for breastfeeding. Breastfeeding was negatively associated with delivery by caesarean section and with the infant having spent time in the Special Care Nursery ***(Dashti, et al., 2010)***.

Other factors positively associated with breastfeeding duration were level of maternal education, higher parity, infant being demand fed in hospital and a preference for breastfeeding on the part of the infant's father and maternal grandmother. The introduction of a pacifier before four weeks of age and the mother intending to return to work by six months were negatively associated with duration ***(Dashti, et al., 2010)***.

Maternity support

The labor law states that women who are pregnant are now allowed paid leave up to 70 days provided they will give birth within this period. New mothers can also request leave for 4 months but it is unpaid (By Law A*rticle 24, 2016*).

In the private sector women can take leave for 30 days before delivery and 40 days after delivery and can request up to 100 days of unpaid leave during pregnancy, continuous or not (Sept 8, 2014).

IV.3. OMAN

Country Prophile

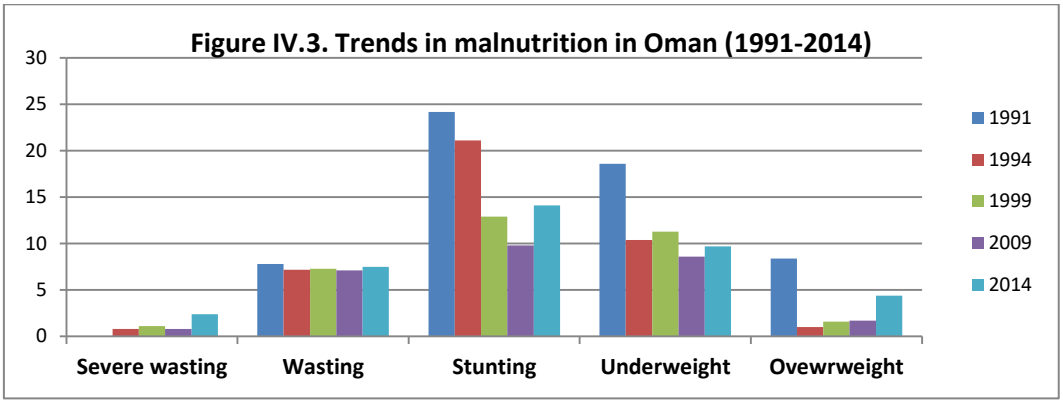
As for the current 2018 fiscal year, Oman is one of six countries in the region that fall in the high income category of countries classified by the World Bank with GNI per capita over 12,236$.

Epidemiological and health status

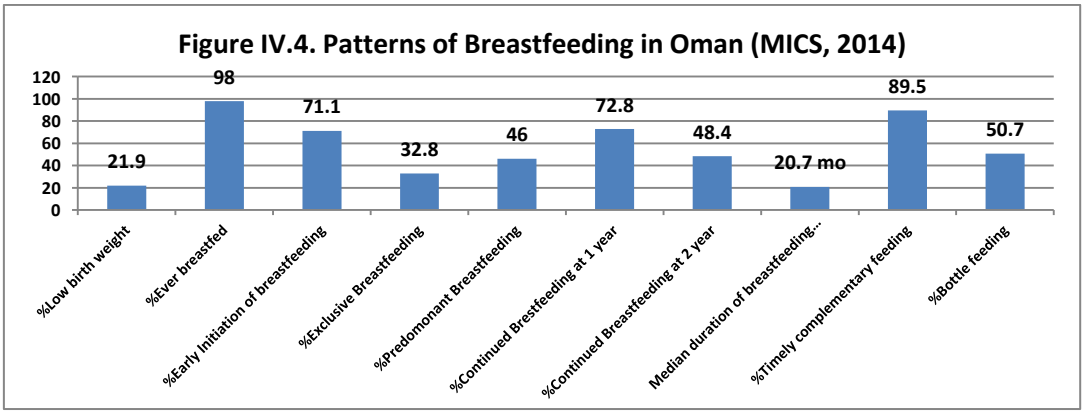
Prevalence of anemia in children under five years of age is 38.4%. Prevalence of anemia in pregnant women is 41.8% and non-pregnant woman is 38%. Cause of death by communicable disease and maternal, prenatal and nutrition conditions is 12.3%. While cause of death from noncommunicable disease (% of total) is 70%. Mortality rate for the under-5 of age is 10.7 per 1000 live births (9.7 for females and 11.7 for males). Pregnant women receiving prenatal care for at least 4 visits is 93.8% and birth attended by skilled birth attendant is 99.1%. Smoking prevalence is 21%.

Infant and young child nutrition:

The survey in 2014 showed that prevalence of underweight is 8.3% in females and 9.7% in males. Prevalence of overweight is (W/L) is 4.4% and stunting is 8.5% in females is 11.3% in males (with 14.1% prevalence overall) (WHO, 2017). Trends in nutritional status show considerable improvements as shown in the figure IV.3.



Status of Breastfeeding in Oman:



EBF in Oman was 32.8% in 2014, according to the World Bank collection of development indicators based on the MICS UNICEF survey in the year 2014.

Early initiation of breastfeeding in the first hour after birth (EIBF) was 71.1%.

Continued breastfeeding: Percent babies and mothers who continue to breastfeed between 9 to 11 months is 72.8%.

Percent babies and mothers who continue to breastfeed between 21 to 23 months is 48.4%.

Percent babies who are exposed to any bottle-feeding is 50.7%.

Al-Nuaimi et al., (2017) highlights the benefits of optimal breastfeeding as well as trends and determinants associated with breastfeeding both worldwide and in GCC countries. Strategies to optimise breastfeeding and overcome breastfeeding barriers in the GCC region are recommended, including community health and education programmes and the 'Baby-friendly Hospital Initiative' (BFHI). Advocates of breastfeeding are needed at the national, community and family levels. In addition, more systematic research should be conducted.

Al-Sinani (2008) discusses the importance of breastfeeding for child health and survival. Oman has taken leaps in the BFHI, expanding with it to all its health facilities in primary health care since it was launched in the 1990's. The Ministry of Health in Oman has taken lead to make all hospitals and health centers in Oman become certified as Baby-friendly in 1999.

Maternity Support

Maternity leave is 50 days for the private sector and 60 days for the public sector. It is fully paid for both locals and expats and is fully paid by the employer.

IV.4. QATAR

Country Prophile

Qatar is categorized among the high income economies (GNI per capita is more than 12,236$) according to the World Bank. Qatar population census is 2,618. Under-five mortality rate is 4/1000 live births, infant mortality rate is 7/1000 and neonatal mortality rate is 8/1000.

Nutritional status of Infants and Young Children

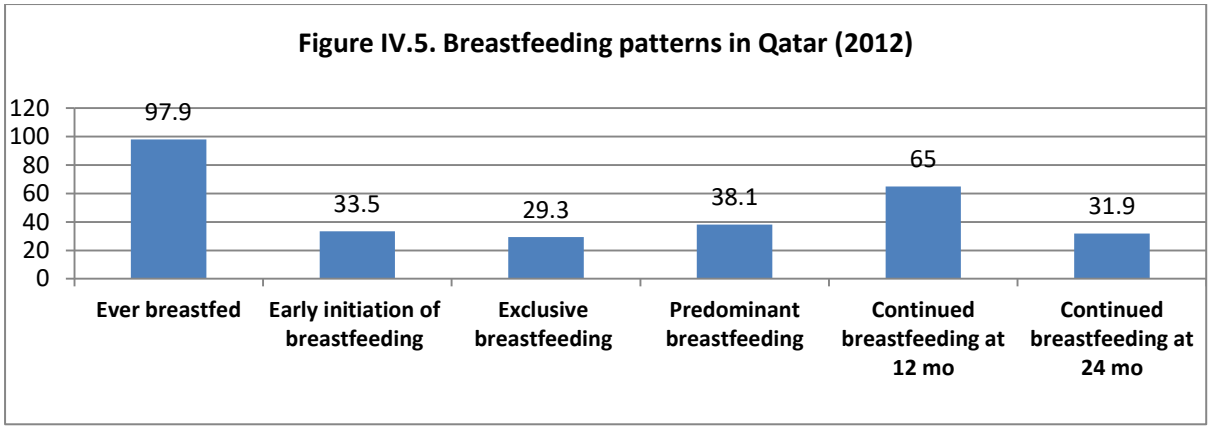
Stunting in children under-five years of age is 11.6% and wasting is 10.1%. Low birth weight is 10.3%. A systemic analysis of the prevalence of anemia in children and pregnant women from 1995 to the present show that anemia is on the rise.

Status of Infant Feeding

Breastfeeding in Qatar:

Children ever breastfed comprised 97.9%.

EBF under 6 months was 29.3%. Predominant breastfeeding was 38.1% (MICS, 2012).



(Source: UNICEF-MICS, 2012).

Continued breastfeeding at one year (12-15 months) was 65.0% (63.7% in females and 66.1% in males). At 2 years (20-23 months it was 31.9% (31.3% in females and 32.5% in males) (MICS, 2012).

Factors influencing early cessation of breastfeeding

Receiving breast milk substitutes, exposure to advertisements for artificial teats, and employment status showed a significant relation with both early initiation and exclusive breastfeeding. On demand feeding was related to EBF, and `rooming in` and mode of delivery was related to early initiation.

Baby-friendly Practices

Early initiation of breastfeeding (EIBF) was practiced by 33.5% of mothers at birth. Rooming in` rate was 43.9% (2012).

There are five main maternity hospitals in Qatar that have been trained and prepared to become Baby-friendly hospitals in Qatar.

Maternity support

Qatari working breastfeeding women are entitled to 40 to 60 days of maternity leave that is fully paid from the Agency of Civil servants.

IV.5. SAUDI ARABIA

Country Prophile

Saudi Arabia is categorized among the high income economies (GNI per capita is more than 12,236$) according to the World Bank. Saudi Arabia population census is 31,742.

Birth rate is births/1000 (2016). Fertility rate is 2 children born/woman. Under-five mortality rate is 4/1000 live births, infant mortality rate is 7/1000 and neonatal mortality rate is 8/1000.

Nutritional status of children under five years of age

Data from the EMR framework for health information systems and core indicators for monitoring health situation and health system performance (***WHO-EMR, 2017***) report that stunting in children under-five years of age is

9.3% and wasting is 11.8% and overweight is 1.5%. Low birth weight is 9%.

Breastfeeding Patterns:

EBF (0-5mo) is variable and inconsistent and ranges from 68.7% (***WHO-EMR,*** 2017) to 13.6% by local studies.

Review from local studies:

EBF at birth was reported in 76.1%, which declined to 32.9% and 12.2% at the age of 2 and 6 months, respectively.

A quantitative cross sectional study including 250 mothers with infant under 2 years of age selected from Tuwal PHC center in Jazan region in Saudi Arabia showed that 87.6% of the 250 Saudi mothers had initiated breastfeeding in the first 8 hours of delivery, only 13.6% infants were exclusively breastfeeding at 4 months of age **(*Adam, 2017*)**.

A systematic review showed the decline in breastfeeding practices in Saudi Arabia. In this review one national child health survey showed that EBF was 55% for children at one month and under, and 36% at 2-3 months old. In another national survey, 90% of infants were EBF initially, this figure dropped to 50% at three months and 10% at one year. A survey in Riyhad showed that initially 72% of mothers were EBF but at 3 months only 42% were EBF. Another survey from Taif reported that 68% of infants at the age of one month were exclusively breastfed; 55% by the age of three months; and to 38% at six months. (***Jassim et al, 2003)***.

Breastfeeding Continuity

In the early 1990s over 57% of the mothers breastfed their children for more than a year, and the mean duration of breastfeeding was 14.61±3.53 months (***Kordy et al., 1993***).

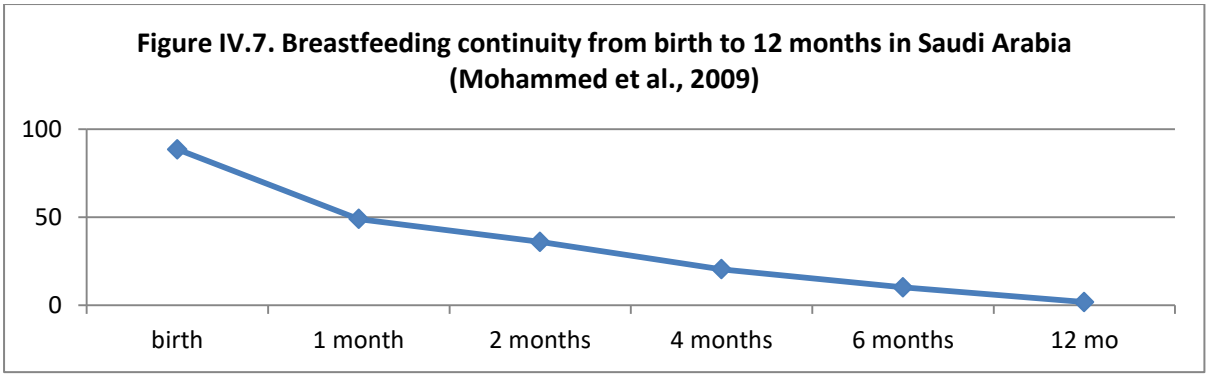
The sudden drop occurred in the late 1990s and early 2000. ***Mohammed et al., (2009)*** conducted a nationwide household survey (2004-2005) of a sample of 5339 children who were less than 3 years. Ever breastfed constituted 91.6%. Formula feeding was introduced very early in life and breastfeeding steeply declined from birth to 12 months reaching 1.8% at 12 months of age.

Continued breastfeeding at 6 months was 10% and at 12 months was 1.8%.

Complementary foods were introduced to infants at 6 months by 81.5% of mothers **(*Mohammed et al., 2009*)**.

Suboptimal breastfeeding in Saudi Arabia is characteristic and seems to be related to many factors. However no one factor can be identified as the real underlying cause for these suboptimal practices. So many studies have explored the patterns of breastfeeding and although variations have been seen between regions, the overall prevalence of breastfeeding for the nation is low.

The only explanation that can be provided to the deterioration which is evident in the situation analysis of breastfeeding is that women themselves are refusing to breastfeed from the long periods of suppression and oppression they have faced over the past decades. They give up on the one thing they can control, their own body and its ability to nurture, this, they can control and this is the one thing they forbid it to do what nature bids it to do, because it is their own choice. It is as if they are rebelling against the culture that forbade them the rights to have their own choices and live the life they would choose to live. In sociological terms, families living and doing such practices are said to be in the adolescent phase of their development.



Initiation of breastfeeding

Only 23.2% of newborns initiated breastfeeding within the first hour after birth, and breastfeeding was delayed beyond 6 hours after birth in 28.1%. Nearly 80% and 90% of the infants were bottle feeding (formula milk) at 4 and 6 months, respectively (***Mohamed et al., 2009***).

Amin et al **(2011)** studied feeding practices among 641 mothers in AlHassa, Breastfeeding was initiated by 77.8% of mothers within the first 24 hours of childbirth.

Causes for early discontinuation of breastfeeding in Saudi Arabia

The commonest reasons for not EBF were milk insufficiency (65.6%), refusing to feed after taking the bottle and return to work (***Adam, 2017***). While rural residence, illiteracy, low-income and multiparous mothers were more likely to continue EBF their infants (***Amin et al., 2011***).

In another study in 2009 the commonest cause given for early cessation was insufficient milk in (45.5%), followed by illness of the mother, breast problems and illness of the baby (***Mohammed et al., 2009***).

Shawky and Abalkhail (2003) attributed the early cessation of breastfeeding to the high cesarean rates, and those using contraceptives as these groups were at higher risk of stopping breastfeeding before 12 months.

Kordy et al., (1993) showed that a considerable proportion of the mothers (42.3%) stopped breastfeeding during the first year. The most common reason for terminating breastfeeding during the first year was insufficient milk (30.9%), and recurrence of pregnancy (27.3%). A minority of the mothers (6.5%) were given advice about breastfeeding by their health care providers (physicians and nurses).

Fida and Aama (2003) reported that breastfeeding rates were 90% for infants in the first 6 months of life, but dropped to 72% afterwards. These were comparatively high breastfeeding rates that were linked to short stay in the hospital and early discharge. The reasons given for switching to formula feeding, in the order of frequency included: inadequate milk supply (50%), working mothers (12.7%) and life style (10%). Mothers who were breastfeeding were significantly more satisfied with their feeding practice than those whom were bottle feeding ($p<0.05$). It seems that the longer the duration of stay in the hospital (which is usually associated with cesarean delivery) the greater the chance of exposure and lending off to bottle feeding.

Early introduction of bottle feeding and the culture of mixed feeding appear to be the most popular method among mothers, this in turn accounts for the low breastfeeding rates. Early bottle feeding has been found to be detrimental to breastfeeding (***Jassim et al., 2003***).

Early bottle feeding is the factor that increases the profit of many infant milk formula companies and has been the driving force for companies to promote its use throughout pediatric practices and maternity hospitals.

Early milk feeding and early use of bottles were associated with the low breastfeeding rates in Saudi Arabia.

Makki et al., (2013) in her dissertation to evaluate the potential impact of the Baby-friendly Hospital initiative (BFHI) in Saudi Arabia, emphasized that the BFHI is a valuable framework for Saudi Arabia to create a set of best practices to improve breastfeeding rates and increase the duration of breastfeeding. However, BFHI knowledge must be increased and professional practices and attitudes changed to support breastfeeding.

On the other hand another study (***Fida and AlAama, 2003*)** showed that only 72 (56%) mothers had some form of education about infant feeding and most of the education came from relatives. Fourteen (10.9%) mothers reported being guided to breastfeed by medical personnel. Early discharge from the newborn nursery before 24 hours age was significantly associated with success in establishing breastfeeding ($p<0.047$).

The highest prevalence rate of diarrhea in Saudi children was present among children exposed to mixed breast and formula feeding. This supports the findings that mixed feeding is dangerous for these babies as it interferes with the proper nutrition and optimal feeding practices required for these infants to build their immune system in this critical period of their life (***Al-Mazrou et al., 1995)***.

Another study showed that many of the mothers whose babies contracted diarrhea stopped breastfeeding. This is one of the underlying causes for the poor breastfeeding rates and could explain the decline in breastfeeding rates at 12 months, as diarrhea was commonest after 6 months of age (***Bani et al., 2002***).

Al-Makoshi et al., (2011) showed that both early EBF and duration of breastfeeding were significant factors in reducing the rates of chest infections with a wheeze presenting to the hospital in children less than 3 years of age. They examined 600 children and reported that children who had been exclusively breastfed were less likely to have 'wheezed' in the last 12 months. In their sample 75% of children were ever breastfed, and 36% of children were fully breastfed, with 20% of children being fully breastfed for ≥3 months. Also increasing duration of full breastfeeding was associated with a reduced likelihood of maternal reporting of her child having "ever wheezed," "wheezed' in the last 12 months," and "ever having asthma," with adjusted odds ratio for full breastfeeding ≥ 12 months versus never breastfed of 0.51 (***Al-Makoshi et al., 2011*)**.

Maternity support

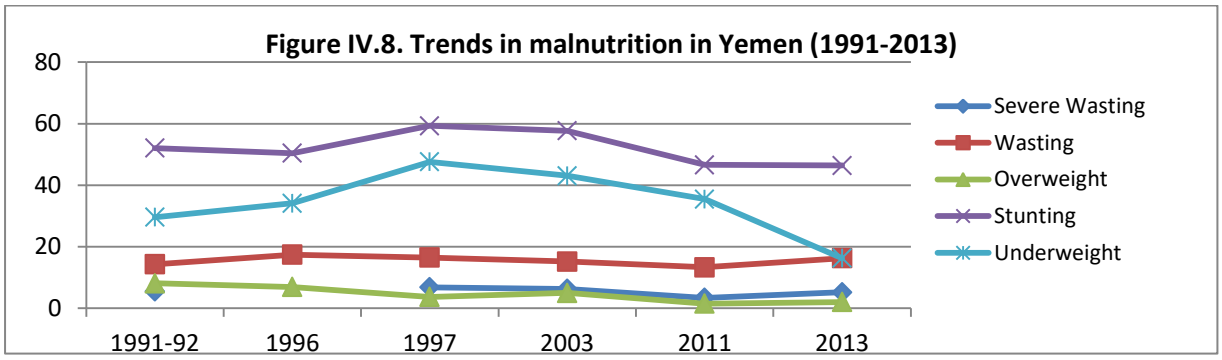
Saudi Arabia grants 10 weeks of maternity leave for working breastfeeding women. They are paid in full or 50% depending on the employer.

In recent years, Saudi Arabia has made significant strides in increasing the percentage of women in the workforce up to 20.2%. There are also significant advancements in the education of women. Saudi women are taking leadership in higher education as more women than men apply to higher education. There are 37 universities in Saudi which are all opened to women to join. Current statistics indicate that 5165 women undertake a PHD which is 41.9% of Saudi women who study abroad. It is now widely agreed that Saudi women have made phenomenal advancements in education.

Studies in Saudi Arabia have shown that policies that support breastfeeding employees to breastfeed or express milk in their workplace are needed to support breastfeeding continuity. A local study reported that when women know about a policy supporting breastfeeding for employees to breastfeed or express milk in their workplace, this was associated with a significantly higher rate of breastfeeding continuity 2 months after return to work and up to one year. Work status and early initiation of formula feeding after baby's birth were all significant factors associated with not having such policies in the workplace. The study emphasizes the importance of supporting women workforce, who are breastfeeding, in achieving their dual role in supporting economic development **(*Alhabas, 2016***).

IV.6. YEMEN

Trends in Infant and Young Child Nutrition



Trends and Status of Infant Feeding:

Breastfeeding

EBF up to 6 months of age (0-5mo) have shown decreasing trends from 17.8% in 1997 to 11.5% in 2003 and recently 9.7% in 2013. The trends were associated with increase in predominant breastfeeding (PBF) from 34.1% in 2003 to 40% in 2013.

EBF was similar in both males and females (9% and 10.4% respectively). It was higher in rural than in urban communities (10.2% and 8.2% respectively).

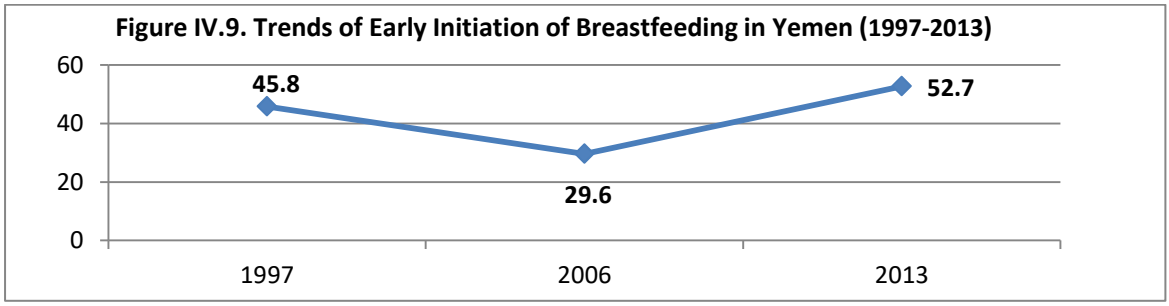
EBF was 19.9% during the first months, 7.4% at 3-4 months and 4.1% at 4-5 months.

It did not change across wealth quintiles (WQ1=10%, WQ5= 9.8%). PBF was 62.1% at one month then increased to 37.3% at 2-3 months and 25.4% at 4-5 months.

PBF was similar in both males and females (37.5% and 42.5% respectively) and in both urban rural communities (41.1% and 39.6% respectively). It decreased progressively by wealth (WQ1= 42.7%, WQ4 = 39.4% and WQ5=33.7%).

Baby-friendly Practices

Initiation of breastfeeding within the first hour was 52.7% in 2013.It was similar in both males and females (52.2% and 53.2% respectively). It was higher in urban (55.2%) than in rural areas (51.2%). No mention of indicators was mentioned about initiation through skin-to-skin or the duration of skin-to-skin contact before the first breastfeed.



There are no data reported over the past two decades for the Baby-friendly Hospital Initiative (BFHI) in Yemen. DHS, 2015 showed that only 34% have a skilled birth attendant at birth and 23% deliver in a health facility. The scarcity of deliveries carried out in hospitals and requires urgent interventions for ensuring community based outreach BFHI programs to be tailored to the needs of such communities and to be integrated with reproductive programs. Maternal mortality is one of the highest in the world (365/100,000 live births (***Family Health survey, 2003***).

Breastfeeding continuity

Continued for 12 to 23 months was 33.9% in 2012/13. It was higher in males (37%) compared to females (30.1%). It was higher in rural than in urban communities (39.7% and 30.5% respectively). By wealth, it decreased by increasing wealth index from WQ1 (46.9%) progressively to WQ5 (29.8%). It also decreased by level of education being 52.7% in the illiterate mothers, 33.5% in mothers with primary education, 36.4% in mothers with secondary education and 22.7% among mothers with higher education. Education seems to have the highest effect on breastfeeding continuity as it decreased by one half among educated mothers which indicates the high levels of ignorance, disempowerment, and lack of support by workplaces or extended family members in such mothers.

Complementary Feeding

ISSS at 6-8 months was 69.2% in 2012. The ISSS was higher in females 71% than males 67.2% and in urban (81.8%) and lower in rural (65.5%). ISSS increased with increasing wealth index from 60.7% in WQ1, 63% in WQ2, 67% in WQ3, 80.5% in WQ4 and 83 in WQ5 (***DHS, 2013).***

The minimum meal frequency (MMF) was 58.5%. MMF was higher in females (57.1%) than in males (60.0%) and in urban (67.3%) than in rural areas (55.4%). MMF was lowest between 6 to 11 months 52.4%, 60.2% at 12-15 months, 66.2% at 16-19 months and 60% at 20-23 months of age with a mean of 62% over 12 to 23 months. MMF increased by wealth quintile from 50% in WQ1 to 52.5% in WQ2, 62.4% in WQ3, 63.3% in WQ4 and 67.7% in WQ5.

The minimum dietary diversity (MDD) is percent of children aged 6 to 23 months receiving 5-8 of the recommended food groups. National levels were 21.3% being lower in males (17.6%) than in females (22.9) and higher in urban (36.7%) than in rural (15.8). MDD rose from 14.4% at 6 to 11 months to 22% at 12-15 months and 27.6% at 16-19 months and 28.2% at 20-23 months with a mean of 25.2% over the second year from 12 to 23 months of age. It increased with wealth from 11.8% in WQ1, 12.2% in WQ2, 19.2% in WQ3, 30.5% in WQ4 and 38.3% in WQ5. Hence the MDD increased by wealth quintile showing that affordability and accessibility to food variety could have been the problem.

The minimum acceptable diet (MAD) was 15.4%. This is very low for the minimum acceptable dietary index and can explain the high rates of stunting and wasting and highest rates of anemia in children under-five years of age the region and in the world. It was even lower in males than females (14 and 17 respectively). MAD was higher in urban (26.6%) than rural communities (11.5%). MAD was lowest at 6-11 months (10.5%) and increased somewhat at 12-15 months to 17.3% and to 19.7% at 16-19 months of age but decreased at 20-23 months to 17.9% with an overall mean of 18.2% over the second year. It increased with wealth from 8.8% in WQ1 to 8.9% in WQ2, 15.2% in WQ3, 20.2% in WQ4 and 28% in WQ5.

Maternity support in Yemen

A pregnant woman is entitled to fully paid leave up to 70 days. It is paid by the employer. She can be granted an extra 20 days if her labour is difficult or she had twins. The working women shall not be dismissed from her work during her

maternity leave. After delivery she is entitled to 60 days of fully paid leave, to be paid by the employer.

IV.7 Summary and Conclusions

The countries in this region include Bahrain, Kuwait, Qatar, Saudi Arabia, Sultanate of Oman and Yemen. United Arab Emirates has not been included due to scarcity of data in this field. Most of these countries are high income countries except for Yemen which is a low income country and facing challenging conflicts. The major problems are related to high prevalence of obesity and its health outcomes.

In Bahrain adult obesity is 30% (2016) and one in every five youth are obese. EBF is 34%. EIBF is 39.3% Feeding prelacteals is common practice at 39.1%. CBF is reported to be 41% at one year. There are 6 Baby-friendly hospitals. 30.4% of children receive foods before 17 weeks of age, but by 27 weeks all babies have been introduced foods. Maternity leave is 45 days, fully paid by employer. Women in Bahrain have a strong status and are highly educated.

In Kuwait adult obesity is the highest in the region 38% (2016) and 8.7% and 6% in the under-fives in 2014 and 2015 surveys. EBF has increased from 2% in 2010 to 12% in 2015. EIBF is 10.5% and 55% are discharged from hospital on partial breastfeeding. CBF is reported as 21% at one year. Adnan hospital is the first and only designated Baby-friendly hospital in Kuwait. ISSS at 6-8 months is 65%. Maternity leave is 70 days, fully paid by employer in the public sector and 40 days in the private sector.

In Oman adult obesity is 28% (2016). EBF is 32.8%. EIBF is 71.1%. CBF for two years (20-23 months) is 48.5%. All hospitals and health centers in Oman were certified as Baby-friendly in 1999. Timely complementary feeding is 89.5%. Maternity leave is 14 weeks, fully paid by employer

In Qatar adult obesity is 35% (2016). EBF is 29.3% and PBF is 38.1%. EIBF is 33.5%. CBF at 12-15 months is 65.0% and 31.9% at 20-23 months of age. Maternity leave is 40-60 days, fully paid by employer.

In Saudi Arabia adult obesity is 35% (2016). EBF is are variable and inconsistent varying between 68.7% and 13.4%. EIBF is 23.2%. CBF is reported at one year is 1.8%. Formula feeding was introduced very early in life and was the cause for the steep decline in breastfeeding. Complementary foods were introduced to infants at 6 months by 81.5% of mothers. Maternity leave is 10 weeks paid in full or 50% depending on the employer.

In Yemen EBF is 9.7%. EIBF is 52.7%. CBF into the second year (12-23 months) is 33.9% and decreased by increasing level of education and wealth index. Complementary feeding practice are poor as shown by the low MAD is 15.4% caused by the low MDD of 21.3% and MMF of 58.5%. Maternity leave is 60 days, fully paid by employer.

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المقال الرابع: أنماط الرضاعة الطبيعية فى بلدان الحجاز و الخليج بإقليم شرق المتوسط

الملخص و الاستنتاجات

تتضمن بلدان جزيرة العرب والخليج التابعة لإقليم شرق المتوسط لمنظمة الصحة العالمية الدول الآتية:البحرين والكويت وقطر والمملكة العربية السعودية وسلطنة عمان واليمن و الإمارات المتحدة. إن معظم هذه البلدان تخضع لمجموعة دول الدخل العال ما عدا اليمن التى تعانى من الفقر والصراعات الداخلية. وأهم المشاكل الصحية التى تواجه هذه البلدان هى البدانة وما يتابعها من مضاعفات صحية.

فى البحرين تبلغ نسبة البدانة 30 في المائة فى الكبار كما يعانى واحد من كل خمس شباب من البدانة. تبلغ نسبة ممارسة الرضاعة الطبيعية المطلقة 34 في المائة ، وتدخل سوائل وأغذية قبل الرضاعة بنسبة 39.1 في المائة ، كما أن 39.3 في المائة يبدأن الرضاعة الطبيعية فور الولادة ولكن هناك41 في المائة من الأطفال يواصلون الرضاعة لمدة عام و30.4 في المائة يدخلن الوجبات عند 6 شهور. وهناك 6 من 28 مستشفى تم اعتمادها كمستشفى صديق للطفل وتمنح الأمهات العاملات 45 يوم أجازة مدفوعة كامل الأجر بعد الولادة.

فى الكويت تبلغ نسبة البدانة 38في المائة فى الكبار وهى أعلى معدل للبدانة فى المنطقة وكما بلغت البدانة فى الأطفال دون الخامسة من العمر8.7 في المائة فى 2014 و6 في المائة فى 2015. وهناك تدني بوجه عام في ممارسة الرضاعة الطبيعية المطلقة ولكنها ارتفعت من2 في المائة فى عام 2010 إلى 12 في المائة فى عام 2015 وبلغت نسبة مواصلة الرضاعة لعام 21 في المائة. كما أن الرضاعة المبكرة فور الولادة متدنية للغاية و تبلغ 10.5 في المائة ، بالإضافة أن 55 في المائة من الرضع يتعرضون للأغذية الاضافية عند الولادة. و هناك 65 في المائة من الأمهات تدخلن الوجبات فى الوقت السليم. وقد تم اعتماد مستشفى عدنان كمستشفى صديق للطفل . وتمنح الأمهات العاملات 45 يوم أجازة مدفوعة كامل الأجر بعد الولادة.

فى عمان تبلغ نسبة البدانة 28 في المائة فى الكبار و ممارسة الرضاعة الطبيعية المطلقة 32.8 في المائة مواصلة الرضاعة الطبيعية لعامين 48.5 في المائة. كما أن الرضاعة المبكرة فور الولادة تبلغ 71.1 في المائة. وهناك 89.5 في المائة من الأمهات تدخلن الوجبات فى الوقت السليم. وقد تم اعتماد جميع المستشفيات والمراكز الصحية كمنشآت صديقة للطفل . وتمنح الأمهات العاملات 14 أسبوع أجازة مدفوعة الأجر بالكامل بعد الولادة.

فى قطر تبلغ نسبة البدانة 35 في المائة فى الكبار ونسبة ممارسة الرضاعة الطبيعية المطلقة 29.3 في المائة ، والرضاعة الطبيعية الغالبة 38.1 في المائة ، ومواصلة الرضاعة الطبيعية للسنة الأولى 65 في المائة، ولعامين 31.9 في المائة. ولكن الرضاعة المبكرة فور الولادة متدنية وتبلغ 33.5 في المائة. وتمنح الأمهات العاملات من 40 إلى 60 يوم أجازة مدفوعة كامل الأجر بعد الولادة.

فى المملكة العربية السعودية تبلغ نسبة البدانة 35.5 في المائة فى الكبار ونسبة ممارسة الرضاعة الطبيعية المطلقة تتراوح من 68.7 في المائة الى حوالي 13في المائة ، و البداية المبكرة بالرضاعة الطبيعية 23.2 في المائة ، ومواصلة الرضاعة الطبيعية للسنة الأولى 1.8 في المائة، وتدخل الأغذية المكملة عند 6 شهور بنسبة 81.5 في المائة. وقد تزايدت العاملات بنسبة عالية وصلت إلى 20% وقد وجد الباحثون أن وجود سياسات لدعم الرضاعة الطبيعية تشجع السيدات على مواصلة الرضاعة الطبيعية ، وتمنح الأمهات العاملات عشرة أسابيع مدفوعة كامل الأجرأو 50% من الأجر تبعاً لسياسة صاحب العمل.

وأخيراً **في اليمن** هناك ارتفاع في نسبة سوء التغذية وفقر الدم كما أن نسبة الرضاعة الطبيعية المطلقة 9.7 في المائة والبداية المبكرة بالرضاعة الطبيعية 52.7% ومواصلة الرضاعة الطبيعية خلال السنة الثانية 33.9 في المائة والتى تنخفض مع ارتفاع نسبة التعليم و الدخل. وتبلغ نسبة التغذية التكميلية المقبولة 15.4 في المائة حيث يبلغ نسبة الحد الأدنى للتنوع في الغذاء 21.3 في المائة ونسبة الحد الأدنى لتواتر التغذية 58.5 في المائة. وتمنح الأم العاملة في اليمن 60 يوم مدفوعة كامل الأجر من قبل صاحب العمل.

Article V

Status of Breastfeeding in Central Asian Countries of the Eastern Mediterranean Region

Azza Abul-Fadl, Noureen Aleem Nishtar, Samaah Al-Yassin, Ayoub Al-Jawaldeh

Overview

These countries include: Afghanistan, Pakistan and Iran. These countries are not Arab states, but share cross-cutting cultural values by the common long history of Islamic influence. These countries are categorized by World Health Organization (WHO) under the Eastern Mediterranean region (EMR).
The countries will be reviewed by their nutritional status and infant feeding status with a focus on breastfeeding and complementary feeding based on the latest global effort by UNICEF for re-analyzing the national surveys linked to Infant and Young Child Feeding (IYCF). Other advocacy issues linked to breastfeeding promotion and support included are the status and trends in the Baby-friendly Hospital Initiative (BFHI) and maternity support for breastfeeding working mothers for each country.

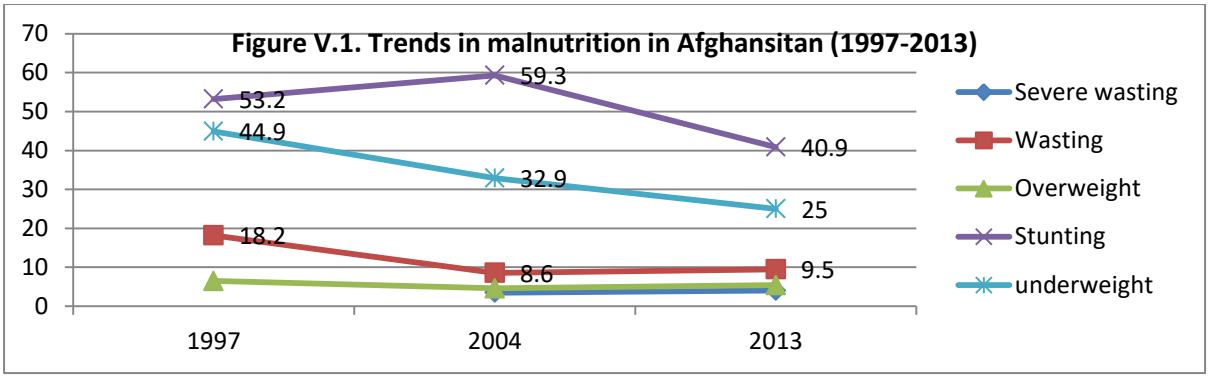
V.1. AFGHANISTAN

Epidemiological and Health status

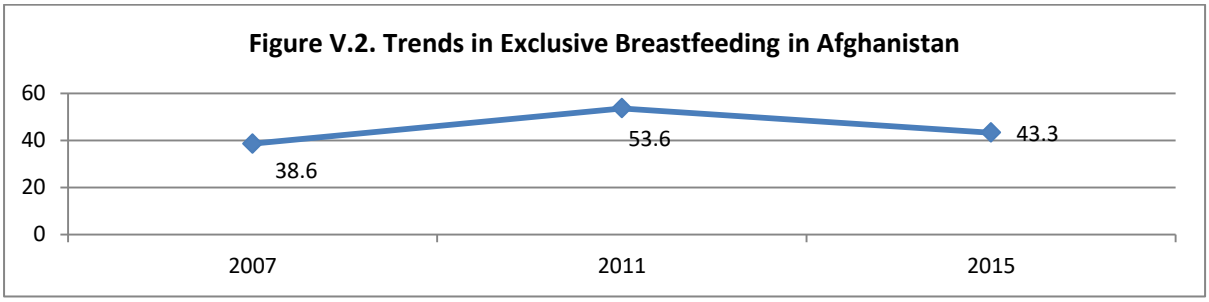
Afghanistan has a population of 34,124,811. Birth rate is 37,90/1000 live births. Some 1.2 million children are already malnourished and 41 per cent of children under five years of age (CU5) are stunted. Poor sanitation (i.e. access to clean water) is 56.7% and hygiene (i.e. access to a place for hand washing) is 70.8%, these indices compound its health problems.

Nutritional Status of Infant and Young Children

The decreasing trends in wasting from 18.2% in 1997 to 8.6% in 2004 and to 9.5% in 2013 are encouraging. Stunting has decreased from 53.2% in 1997 and 59.3% in 2004 to 40.9% in 2013. However stunting is still very high. Overweight is an emerging problem in CU5 and has increased from 4.6% in 2004 to 5.4% in 2013. While underweight has also decreased from 41.9% in 1997 and 32.9% in 2004 to 25% in 2013. This double burden of both overweight and underweight among the poorest of countries in the region is an indication of poor feeding practices.
Children, in such situations are more susceptible to repeated infections as diarrhea, which in turn worsens malnutrition. Diarrhea-related deaths, total 9,500 and account for around 12 per cent of the 80,000 deaths of CU5 that occur annually in Afghanistan (**UNICEF, 2017**).



Breastfeeding Patterns in Afghanistan:



Although children ever breastfed in Afghanistan is high (93.4%), EBF shows declining trends. Most of the decline happens in the first 6 months of life.

Trends in EBF decreased from 54.3% in 2011 to 43.1% in 2014 (DHS, 2015) being even lower in the urban (40.9%) than in rural areas (43.8%). It was highest in the central highlands (64.9%) and lowest in the West, North and East regions (47.8%, 48.1% and 49.1% respectively). It was lowest among mothers with higher education (36.4%) compared to those with primary or no education (58.8% and 55.4% respectively). Rural mothers tend to practice EBF (55.2%) more than urban mothers (50.9%).

EBF rate in Afghanistan increased by increasing wealth index from 40.3% in the poorest (WQ1), and 48.1% in the richest (WQ5). It decreased by increasing level of education; being 44% in the illiterate and 23.9% in the highly educated.

Predominant breastfeeding (PBF): Offering herbal drinks with breastfeeding to infants below 6 months was 69.2%. PBF was higher in females (781.7%) than males (66.8%) in 2011 and has decreased to 54.2% in 2015. Rural mothers tend to practice PBF more than urban mothers (70.5% vs. 64.4%). Hence there was a higher tendency of PBF. Bottle feeding rate is 28.2% in the 2011 survey. The high PBF could explain the high bottle feeding rate.

Continued breastfeeding (CBF) for 12 months (12-15 months) is 87.8% and continued breastfeeding for 24 months (21-23 months) was 69.2%. This may appear to be high but when combined with the suboptimal complementary feeding practices and high bottle feeding rate, it can explain why problems of communicable disease and malnutrition prevail in this country.

Mean duration of breastfeeding is 23.7 months which reflects the important role breastmilk plays in supporting nutrition in these underprivileged communities. This is substantiated by the finding that underweight, stunting and wasting are highest among the poor and at ages 24-35 and 36- 48 months i.e. in the 3 and 4 years old children, which is after they stop breastfeeding.

In the DHS (2015) breastfeeding continuation to 23 months was 58.6% with no difference between sexes but it was higher in urban (60.9%) than in rural communities (57.7%). However it decreased by increasing wealth status being 62.4% and 63.7% in the poor (WQ1 & WQ2) and lowest in the richest (WQ5)

(55.1%). CBF decreased by increasing level of education. It was 59% in the illiterate and 54.4% in the secondary & highly educated mothers. These patterns of infant feeding indicate that the major portion of nutritional intake of the poor comes from breastfeeding in the second year of life and that once they stop breastfeeding they become at risk of malnutrition through low intake and increased exposure to infection in the challenging environments they live in.

Early initiation of breastfeeding (EIBF) within the first hour of life was 53.6% in 2011 (UNICEF, 2011). It was highest in the North East region (70.8%) and West (63.5%) and lowest in the South and South East (24.1% and 37.4% respectively). EIBF decreased to 40.9% in DHS, 2015. The survey showed that EIBF was higher in the rural population (41.9%) compared to the urban (37.7%) and in females (41%) more than males (38.3%).

Increasing wealth was associated with a decline in EIBF. EIBF was 45% in the poorest (WQ1) and 35.4% in the richest (WQ5). Mothers who are rich deliver in private hospitals, while the poor women have home deliveries or deliver in facilities that use less medication during labour and perform less separation and medicalization procedures.

Prelacteals are offered to 29.8% of newborns being highest among the poorest (32.2%) and least among the middle and fourth wealth quintile index (28% and 28% respectively). It is highest in the south region (50%) and also in the North and North East regions (33.9% and 33.9% respectively (UNICEF, 2011).

Prelacteal feeding is particularly high in the private sector (40.0%) compared to the public sector (28%). It is also more common among deliveries attended by a traditional birth attendant (TBA) (34%) (UNICEF, 2011).

All the Ministry of health maternity facilities are certified as Baby-friendly.

Complementary Feeding Practices (DHS, 2015):

Poor complementary feeding (CF) practices prevail and accentuate the risk of children to malnutrition. Timely introduction of solids and semi-solids at 6-8 months (ISSS) was 20.1% in 2011 and increased to 61% in 2015 (DHS, 2015), being higher in females (62.1%) than males (60.0%). It is higher in rural (61.5%) than in urban areas (59.6%).

Effect of level of wealth and level of education on complementary feeding practices ISSS:

Highest values of timely ISSS were seen among mothers with high wealth index (WQ4) (71.4%) and lower education primary education (72.8%) compared to women with secondary and high level of education (52% and 64.8% respectively). The lowest ISSS were seen in the WQ5 (49.5%) and highest in WQ1 (60.4%). Such findings probably indicate that richer mothers are introducing foods earlier and the poorer mothers introduce foods later and rely on breastfeeding, probably due to food scarcity.

Minimum meal frequency (MMF) was inadequate at 17.8% in 2011 but increased to 51.8% in 2015 DHS survey. The latter was higher in males (51.5%) than in females (50.9%) with no difference between rural and urban communities (51 & 51.8% respectively). It was lowest in the second half of the first year (45.7%) and increased in the second year from 53.6% to 55% which was still poor showing that just over one half of the children receive an acceptable MMF.

Minimum dietary diversity (MDD) (DHS, 2015) was also low at 22.1% both in males (21.2%) and females (22.9%). However it is higher in the urban than in rural communities (32.5% vs. 18.6% respectively). Poverty and ignorance are associated with low MDD as it was 18.1% in WQ1 and 34.5% in WQ5. MDD was 20.5% in the illiterate and primary education groups and 46.1% in the highly educated. Meal diversity remained low throughout the first year (14.1%) and well into

the second year increasing only to a peak of 26.9% in the second year.

Minimum acceptable diet (MAD) was 15.5% (DHS, 2015) with no difference between males and females but was much lower in rural than in urban communities (18.7% vs. 21.8% respectively). MAD was lowest in the lowest quintile and illiterate (12.4% and 18.3% respectively, compared to the highest quintiles (WQ5) (23.1%) and the highly educated (24%).

Baby-friendly Hospital Practices

Childbirth practices are traditional. Skilled birth attendant at delivery is 38.6%. Institutional deliveries are 32.6% and Cesarean section deliveries are only 3.6%. Hence Baby-friendly practices need to be promoted in the community since most of the deliveries are carried out at home.

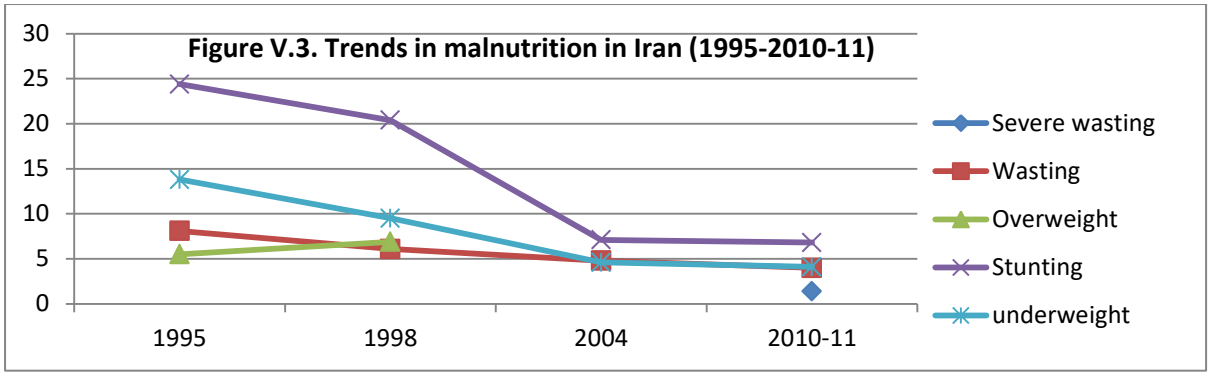
Maternity support

In Afghanistan most women do not work in the sense of going to a disciplined governmental or private sector. However they carry the burden of an unpaid fulltime working housewife that has no breaks, no special privileges and no career promotion, other than watching her family grow and move away from her after a life-long desperate struggle to make them grow, learn, develop and become independent individuals. Governments do not recognize this important workforce for economic development and although the religion that presides in this country is Islam which calls for giving these women rights including payment and other privileges, this is not the case for these mothers. Few countries allow special places for breastfeeding in public or give mothers food stamps or welfare payments. However this country is not capable of providing any such advantages for women, who are mostly marginalized and prevented from appearing in public or sharing a social life. Dysfunctional families prevail and father support is 61.8%.

Marriage before the age of 15 years is 15.2%. Hence one to two females get married while still in their early teens and before full maturity is achieved. Marriage before 18 years is 46.3%. Illiteracy rates are high especially among females and access to media is limited. Antenatal coverage (at least 4 times) is low (14.6%), hence access to health care is limited especially in the vulnerable period of pregnancy. The isolated Afghani woman thus places herself and her child at risk of poor health and feeding practices because of lack of correct information, and in the same time she becomes easy bait to misinformation from the marketing practices of products that interfere with breastfeeding.

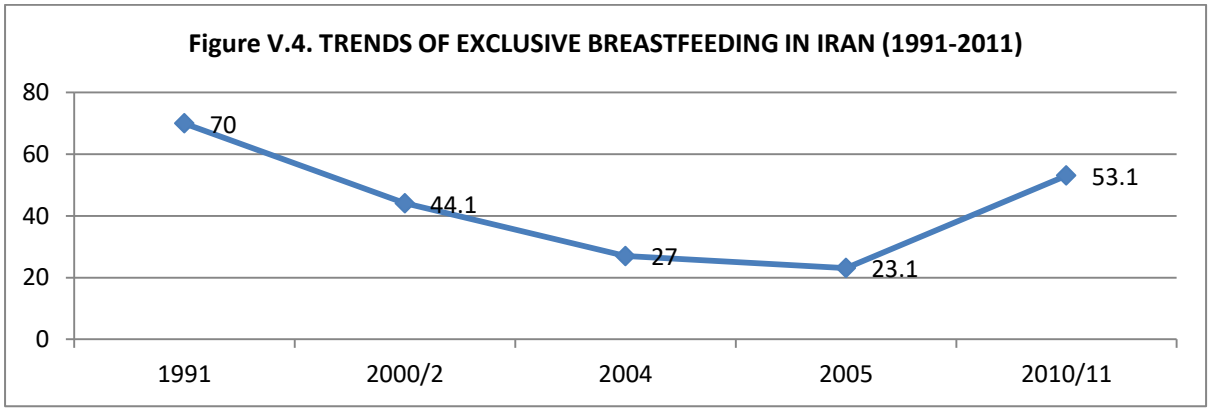
V.2. Iran (Islamic Republic of Iran)

Trends in Nutritional status of infant and young children (IYC)



Iran is showing evidence of improving trends in nutritional status of children under the age of five years. Trends in stunting have decreased by one third from 24.4% in 1995 to 6.8% in 2010, undernutrition also decreased by one third from 13.8% to 4.1% and wasting has decreased by one half. This goes hand in hand with the increasing rates of breastfeeding since the launching of the Baby-friendly Hospital Initiative (BFHI) in the early 1990s with the majority of hospitals becoming Baby-friendly. There are also high scores of complementary feeding practices and this is supported and augmented by the high rates of women education and social and political support to enable them to breastfeed. Iran is one of the first countries in the region that has extended paid maternity leave to six months. Women empowerment to successfully breastfeed is a key issue to sound nutrition and optimum growth and development of children.

Trends and Status of IYCF: Breastfeeding in Iran



National studies

National studies conducted by UNICEF are shown the figure displayed above.

Local studies

A number of national studies were conducted to assess breastfeeding patterns in Iran as follows:

Zareai et al., (2007) reported that exclusive breastfeeding rates (EBF) in Iran in 2001 was 67.1 at 3 months and 56% at 6 months.

Aghababaei et al., (2014) conducted a study to assess breastfeeding practices in Hamdan city through a cross sectional study comprising 1200 infants aged one to 12 months of age. They found the following:

EBF at one month was 93% and 75% at 4 months and 68% at 6 months of age. On demand feeding was practiced by 72.3% of mothers. Education, parity, gender and education in breastfeeding was associated with longer duration of EBF.

The prevalence of EBF in Iran was 70% in 1991 and 44.1% in 2000. Hence EBF in Iran declined from 70% in 1991 to 27% in 2004. Moreover in 2005, this prevalence was 23.1% and varied from 22.7% in urban to 24% in rural areas,

respectively. The data was retrieved from the framework of National Health Survey in Iran. ***(Khabazkhoob et al., 2007, Rashidan, 2010, Kelishadi et al., 2016).***

In the years 2005/2006 a retrospective study of 63,071 infants below 24 months in 30 urban and rural provinces in Iran (2005-2006) was conducted by the Ministry of Health. It revealed EBF to be 56.8% at 4-6 months and 27.7% at 6 months (***Olang et al., 2009***).

A more recent nationwide cross-sectional study was conducted in the framework of a national survey: Iran Multiple Indicator Demographic and Health Survey (IrMIDHS). It was conducted in 31 provinces of Iran. Participants were selected by multistage cluster sampling. The target sample was 3,096 clusters consisting of 2,187 urban and 909 rural families. Data were collected using a questionnaire through face-to-face interviews. ***(Kelishadi et al., 2016).*** The study showed a significant rise in the EBF and overall breastfeeding rates.

In 2016, the rate of EBF in the latter study, was 53.13% with higher prevalence in rural (67.76%) than in urban areas (47.79%) (P = 0.04), and among girls (56.35%) compared to boys (50.60%). The prevalence of breastfeeding as the main diet for Iranian infants under six months old was 70.72%.

Continued Breastfeeding (CBF) (12-15 months): In 1998 breastfeeding was 87% in urban areas and 89% in rural areas (***Hajian-Tilaki, 2005***). In 2016 it is reported as 84.2%. In rural areas women tended to breastfeed longer (88.74%) compared to mothers living in urban areas (81.39%).

CBF at 2 years (20-23 months): In 1998 breastfeeding was 53% at 24 months (***Hajian-Tilaki, 2005***). In 2016 CBF was 51%. It was 52.2% in males and 49.7% in females. By residence, mothers in rural areas tended to breastfeed longer (53.3%) compared to mothers living in urban areas (50.48%) (***Kelishadi et al., 2016***).

Bottle feeding below 23 months was 31.15%. It was higher in urban communities (33.9%) than rural ones (26.32%). But was it was the same in females (31.24%) and males (31.03%).

Causes of early breastfeeding cessation in Iran

Mirandi et al., (1993) studied the causes for early weaning among mothers in Tehran. They performed a cross-sectional study of 600 randomly selected mothers with infants 12-24 months old in the north of Iran in 1998. Breastfeeding was 87% and 89% at 12 months in urban and rural areas and 18% and 53% at 24 months, respectively (***Hajian-Tilaki, 2005***). Women with high education appeared to have shorter duration of breastfeeding in comparison with illiterate mothers. After controlling the effect of mother's working status and other variables using the Cox regression model, high level of education had a positive association with longer duration of breastfeeding, i.e. the risk of weaning was decreased in comparison with illiterate women. Also, the risk of shorter duration of breastfeeding was increased significantly among mothers with a high level of stress (***Hajian-Tilaki, 2005***). The main causes of early cessation of breastfeeding and shorter EBF was related in the high social economic standard (SES) and return to work and this was noticed in the districts with women with higher SES as in the districts of North Khorasan and District of Yazd. In the former it has the highest EBF at 4 months but falls at 6 months because women return to work. In Yazed they have the lowest EBF and lowest Baby-friendly hospitals, despite the high SES. In a Qom district EBF at 4 months is 54.4% and yet it falls to 26% because women return to work.

A cross-sectional study was done in 2012 to identify the factors related to breastfeeding and its perceived health benefits among Iranian mothers. They studied 240 postpartum women who were selected randomly from eight public health care centers in Hamadan, Iran. The mean length of breastfeeding was 11.6± 12.5 weeks. Mothers' perception of the severity of child illness was significantly higher in those who

breastfed than those who never breastfed. In contrast, breastfeeding mothers had a significantly higher perceived confidence of medical care to prevent diseases and a higher perception of reverse parent-child roles than non breastfeeding mothers (p<0.050) (***Parisa et al., 2015***).

***Nayeri et al., (2015*)** studied breastfeeding practices of 400 Iranian mothers with infants aged 21-27 months. Mean breastfeeding duration was 19.66±6.4 months and median duration was 22 months. Causes of cessation of breastfeeding included insufficient milk (77.9%), infant restlessness (77.1%) and mother reluctance to breastfeed (75.6%). Gestational age, birth trauma, health staff skills in breastfeeding and early skin to skin contact had a significant effect on the duration of breastfeeding (P<0.03, P<0.04, P<0.05 and P<0.001 respectively). The authors concluded that lots of efforts are needed to improve breastfeeding status in Iran.

Baby-friendly Hospital Practices

Early initiation of breastfeeding (EIBF) (up to the first hour after delivery) was 68.7% in the 2016 national survey. It was higher in urban (70.64%) than in rural communities (67.59%) and in females (66.64%) than in males (63.59%).

The primary reasons for delayed initiation were lack of milk and cesarean section delivery (62% were delivered vaginally).

A national board set standards and certified pre-service education at MoH. For the first time the national coordinator for the Baby-friendly was the first International Board Certified lactation Consultant (IBCLC) in 2007. Baby-friendly hospitals (BFH) that became certified were 466 out of a total 566 hospitals. Total hospitals to Baby-friendly hospitals per 100,000 population (TH:BFH) varied from one district to another. In Ilam district the TH:BFH was 0.71 to 0.91, In North Khorasan it was 1 to 0.61, In Sustanbalo Chestan it was 0.88 to 0.33 and in Yazd district it was 0.92 and 1.31. Qom had the lowest BFH.

Complementary Feeding

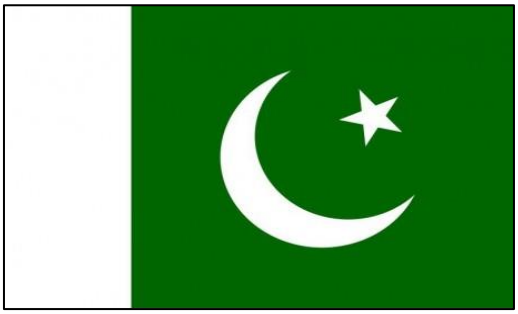
Timely complementary feeding was assessed by the age of introduction of soft, semi-solid and solid foods (ISSS). Foods were introduced from 6-8 months in 75.9% of infants. It was earlier in rural (72.97%) than urban inhabitants (77.65%) and in males (71.46%) than in females (80.6%). Complementary foods included solid, semisolid and mashed foods (***INS, 2012***). The data of the survey were not reanalyzed for assessing MMF, MDD and hence the percent of children receiving MAD was not available to the moment of presenting our data.

Maternity support

The maternity paid leave for Iranian working breastfeeding women has been extended from 16 to 24 weeks in 2007 (120 days) in the public sector. This had a big effect on increasing EBF in 2015; which doubled from 23% in 2005 to 53% in 2010. However in the private sector, maternity leave is only 90 days instead of 120 days as in the public sector. Maternity leave is partially paid as 66.7% of the wages by the Social Security fund. Iran is the first country in the region to extend maternity leave to six months or 120 days in order to encourage women to exclusively breastfeed for six months. However this needs to be extended to two years in order the to support breastfeeding mothers to continue breastfeeding for two years as urged in the holy texts of the Quran (Surat AlBakara, verse 233).

Governments need to provide these women with extra support as they represent an economic asset to the country.

V.3. PAKISTAN



Country Prophile

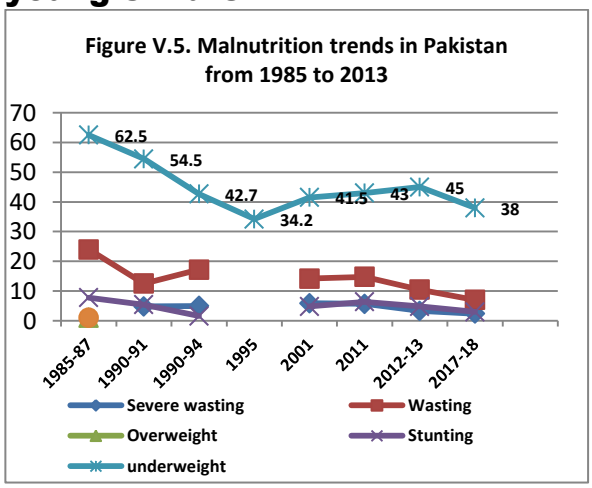
According to the World Bank country categorization by income, Pakistan is among the lower middle income economies (GNI per capita is $1006 to 3,955). It consists of five provinces (Balochistan, Khyber Pakhunkhwa, Punjab, Sindh and Gilgit-Balastan), 2 autonomous territories and one federal territory. Punjab province has the highest populous and Gilgit-Balastan is lowest. While Punjab has the highest GDP and Gilgit-Balastan has the lowest GDP.

The latest population census in 15th May, 2019 has increased to 204,078,794 being the fifth most populous country in the world (2.65% of the world) and rapidly rising. Birth rate is 2.9 births/1000 (in 2016). Fertility rate is 2.68 children born/woman.

Overall, under-five mortality has decreased from 104/1000 live births in 2011 to 75/1000 live births in 2014. However infant mortality rates (IMR) have increased from 82/1000 live births in 2011 to 93/1000 live births in 2014. It must be mentioned that in the latest survey of 2017 the IMR in the Gilgit-Balstan region of Pakistan was reported as 74/1000 live births and under-five mortality rate was 92/1000 being 47 in urban and 101 in rural and low birth weight rate is 30% (***UNICEF 2016-17***). This is in comparison with a country of the GCC as Oman where IMR is reported as 8/1000 and U5MR is 11/1000 (***UNICEF, 2015***).

Malnutrition is the commonest cause of infant mortality mostly due to poor feeding practices. Hence it is important to study infant feeding practices especially with regards to optimal breastfeeding practices.

Trends and Status of IYCF: Nutritional status of infants and young children



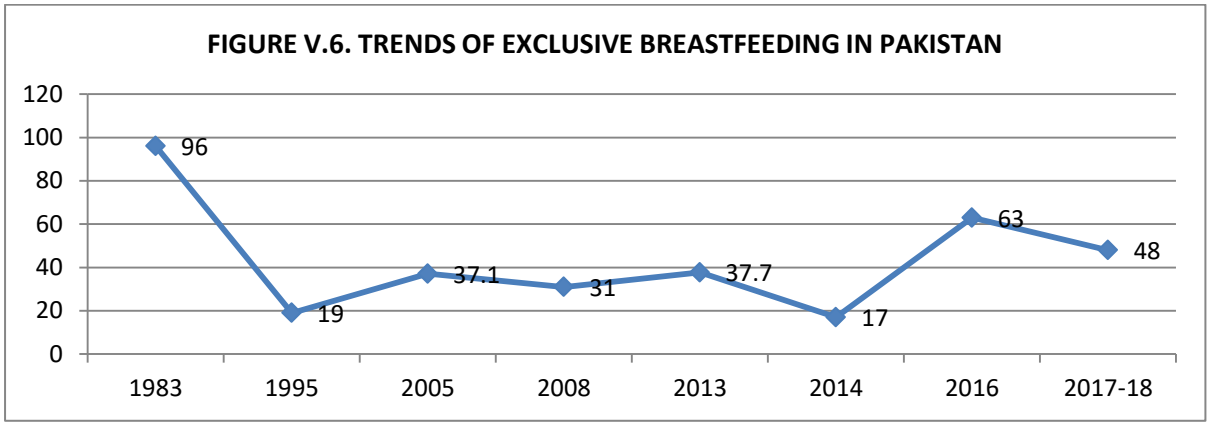
Mild to moderate underweight (33%) and severe underweight (11%) in children under-five years of age have not changed from the early 1990s. However the recent survey has shown an increase in underweight to 23% (***DHS, 2019***).

Stunting in children under-five years of age is 45%. Mild to moderate stunting has decreased slightly from 2011 to 2014 (36% to 33.4% respectively) and severe stunting (15% to 13.3% respectively). In the most recent survey in 2017-18 stunting has decreased again to 38% (***DHS, 2019***).

Wasting has decreased from 11% to 7% in the most recent survey in 2017-18. Mild to moderate wasting has increased slightly from 2011 to 2014 (16% to 17.5%) and severe wasting was 4.4% and has not changed from 2011 to 2014. Low birth weight is 11% (2014).

Anemia in children under-five years of age is 58.8% and anemia in non-pregnant it is 52.2% and has not changed.

Breastfeeding in Pakistan



In Pakistan prevalence of breastfeeding has decreased from 96% in 1983 to 31% in 2008 (***Hirani and Karmaliani, 2013***).

EBF: The 2017-18 national survey reported that EBF under 6 months is 48%. At 0-1 months 55% are EBF and at 4-5 months 34.8% are EBF Regional differences show that EBF ranges from 17% in Punjab (***UNICEF, 2014***) to 63% in Gilgit-Balistan region of Pakistan in 2016-17.

Predominant breastfeeding (PBF) has increased from 47.8% in previous surveys to 57% in 2017-2018. Median duration of PBF is 3.5 months.

Bottle-feeding: In the first month one third are offering bottles and at 9-11 months one half are offering bottles (***DHS, 2019***).

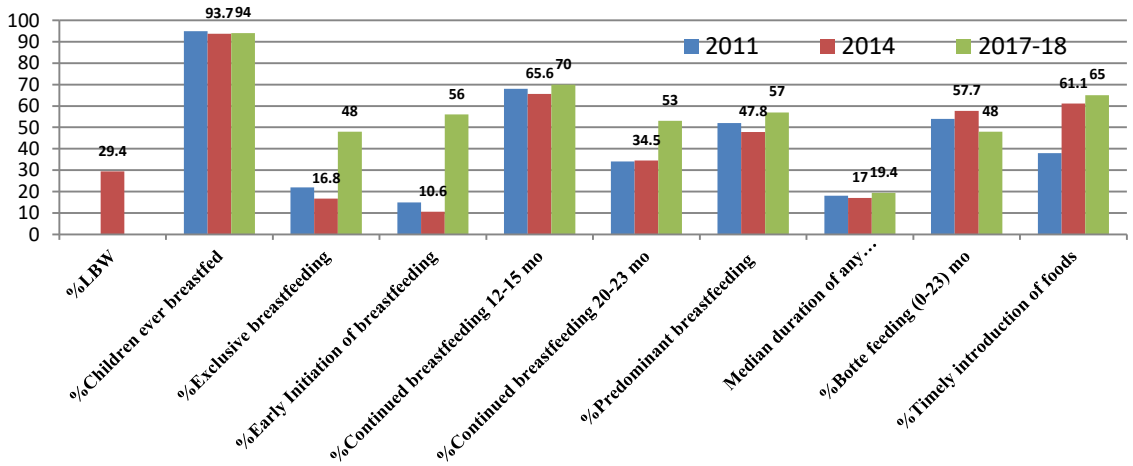
Breastfeeding continuity:

Continued Breastfeeding (CBF) (12-15mo) is 65.6% (MICS, 2011 and 2014) and increased to 70% in 2017-2018 (***DHS, 2019***).

CBF (20-23mo) is 34.5% (MICS, 2011 and 2014) and increased to 53% in 2017-18. The main reasons for stopping breastfeeding are maternal causes in 42% and new pregnancy in 22% (16% in urban and 22% in rural areas) (***DHS, 2019***).

Regional differences show that CBF (12-15mo) in the Gilgit-Balistan province is 80.7% vs. 66% in the Punjab province. While CBF at age 20-23 months is 50.8% in Gilgit-Balistan and 35% Punjab (***UNICEF, 2018***).

Figure V.7. Trends and patterns infant feeding practices in Pakistan (2011 - 2014)



Source: MICS UNICEF survey in 2011 and 2014, DHS in 2019

Bottle feeding appears to be one of the main barriers to CBF. Although bottle-feeding appears to be declining, however, these are really due to regional disparities. Bottle-feeding rates were high in Pakistan in the UNICEF surveys of 2011 and 2017-2018. Regionally

27.5% had received a bottle in the previous day in Gilgit-Balastan (***UNICEF MICS, 2016-17***) and 57.7% in the Punjab survey (2014). A study by Tibash showed that factors that increased the likelihood of a woman to bottle-feed her child included higher education, nuclear family, education about breastfeeding after rather than before delivery, delayed initiation and exposure to marketing. Husband support had a positive influence on continuation of breastfeeding.

Baby-Friendly Practices in Pakistan

Early initiation of breastfeeding in the first hour after birth (EIBF) has increased to 20% in 2017-18 (DHS) from 15% in 2011 and 10.6% in 2014 (MICS). However there are regional disparities show it to be higher in Gilgit-Balistan province (34%) (***MICS, 2016-17***)

In Pakistan there are 75 Baby-friendly hospitals (BFHs). The highest number of BFHs are in Sindh province where 52 hospitals were declared as Baby-friendly. Local studies show that breastfeeding rates are much higher in the BFHs compared to the non-BFHs and recommend that BFHI should be expanded to all hospitals in Pakistan (***Khan et al., 2013***).

Complementary Feeding:

There was an increase in timely introduction of solids, semi solids and soft foods (ISSS) at 6-8 months from 39.2% in 2006 to 66.9% in 2012. In 2017-18, 65% of breastfed and 67% of non-breastfed received solids or semi-solid foods (***DHS, 2019***).

The ISSS was higher in males 71% and lower in females (62.3%). It was higher in urban (81.6%) than in rural (59.7%). ISSS increased with increasing wealth index from 52% and 49% in poorest mothers (WQ1 and WQ2) to 85.5% and 83.2% in the richest mothers (WQ4 and WQ5) respectively. ISSS increased with level of education from 54.3% in the illiterate to 81.9% and 81.2% in the children of women with secondary and higher education (PDHS, 2013).

The minimum meal frequency (MMF) is 63% in all children being 52% in breastfed and 85% in non-breastfed (DHS, 2019). The previous survey showed it to be 62.7% being higher in males (61.5%) than females (63.9%) and in urban (70.6%) than in rural (59.2%). MMF tends to be lowest at 6 to 11 months (53.0%) and increases to 73.6% at 20-23 months. MMF increases by wealth quintile (57% in WQ1 and 77.4% in WQ5) by level of education being 75.8% in the highly educated and 61.9% in those with primary education and 58.7% in the illiterate (***UNICEF, 2018***).

The minimum dietary diversity (MDD) is percent of children aged 6 to 23 months receiving 5-8 of the recommended food groups. National level is 21% in all children 6-23 months (18% in breastfed and 27% in non-breastfed) (DHS, 2019). MDD tends to be higher in males (18.7%) than females (16.9%) and in urban (22.7%) than in rural (15.7%). MDD was lowest between 6 to 11 months (10.6%) and increased to a peak of (27.2%) at 20 to 23 months. MDD increases with wealth from 10.6% in WQ1 to 28.6% in WQ5. It also doubles by level of education from 17.4% in the illiterate to 34.3% in the highly educated.

The minimum acceptable diet (MAD) is 15% in breastfed and 8% in non-breastfed being 13% in all children 6-23 months (DHS, 2019). This is below the acceptable levels by international standards. It was similar in both males and females (14.9% and 14.7% respectively). MAD was higher in urban (20.2%) than rural communities (12.4%). MAD increased by age from 9.4% in second half of the first year increasing to 22.0% in the second year at 20-23 months. MAD increased with wealth from 8.6% in WQ1 to 26% in WQ5. MAD increased with education from 10.7% and 14.4% among mothers who were illiterate or had primary education to 19.2% in mothers with secondary education and 22.7% in mothers with higher education.

Regional disparities are present as ISSS at 6-8 months is 61% in Pakistan (Punjab) compared to 89.3% in Oman. MMF (4 times/24 hours) is 75% in Iraq and 69.7% in Pakistan compared to

89.5% in Oman. In Pakistan only 26% of children aged (6-23) received the recommended MDD i.e. five types of developmental food aggregates compared to 67.2% in Oman. While MAD is 21.2% and is higher than national levels. The proportion of children receiving the MDD increases with the increase in the educational level and the wealth index and as children get older, especially at 18 months and above, as well as in urban compared with rural children (***UNICEF, 2018, UNICEF, 2016-17***).

Knowledge about breastfeeding

A study conducted to assess the knowledge of mothers about the benefits of breastfeeding showed that women's knowledge about EBF duration was known to only 40(40%), and only 54(54%). Ninety percent of women knew breastfeeding reduces child's infections and 80(80%) knew the contraceptive benefit of breastfeeding. Knowledge of prevention of breast cancer, post-partum bleeding and osteoporosis were found to be deficient (<50%). Breastfeeding knowledge in medication and Hepatitis- B was 58 (58%) and 59 (59%) respectively. However, deficient knowledge was demonstrated in tuberculosis and HIV/AIDS (<50%). Although 50% of the women were illiterate the effects of literacy upon knowledge, duration and benefits of breast feeding were non- significant among the study population (***Rehman et al., 2017***).

Another study examined the practices of mothers towards breastfeeding and complementary feeding. They found that only 18% introduced complementary feeding at the recommended age, while 72% introduced solids before 6 months. The use of commercially advertised (readymade baby foods) was offered to babies by 19.6% of mothers and in combination with local foods by 24.2% of Pakistani mothers. The workers concluded that complementary feeding practices are far from adequate in Pakistan and could account for the low nutritional status in the country (***Arif et al., 2015***).

Maternity Support

According to the Mines Maternity Benefits Act 1981 and The West Pakistan Maternity Benefit Ordinance 1958, every employed woman is entitled to 12 weeks of fully paid maternity leave in Pakistan. She can take 6 weeks before delivery and 6 weeks after delivery. The six week postpartum leave is compulsory. The maternity leave in public sector is 90 days (fully paid leave). The law does not place any limits on the number of times. However in the public sector she is only allowed leave for three times in her entire career except for those employed in the vacation department.

In Pakistani workplaces little attention is paid for working breastfeeding mothers. An extensive literature review showed that working mothers would be supported to breastfeed if they are educated on how to maintain lactation. Also employers need to be made aware of the benefits of breastfeeding for their workplace and thereby provide these mothers with places and facilities where they can pump or breastfeed their child and store their expressed milk. Also working mothers need be granted flexible hours for breastfeeding. The initiation of mother friendly policies at workplaces cam encourage breastfeeding and impact the economy (***Hirani and Karmaliani, 2013***).

V.4 Summary and Conclusions

The countries discussed in this section were Afghanistan, Pakistan and Iran. These countries have highest population density in the EMR. Pakistan alone is the fifth most populous country in the world, with an ominous growth rate. They are distinguished from their other Asian EMR neighboring countries by having different languages but they are all influenced by the predominant Islamic culture.

In Afghanistan EBF is 43.3%, it was highest in illiterate (44%) and in those with highest wealth index 48.1%. EBF increased by increasing wealth index. PBF was 69.2% and CBF for one year 87.8% and for two years 69.2%. EIBF is 53.6%. Prelacteals are offered to one third (29.8%) of the newborns. ISSS at 6-8 months increased to 61% in 2015. Also MMF and MDD increased to 50.9% and 22.1% this explains the

high rates of stunting (40.9%) and wasting (9.5%) despite the high CBF rates.

In Iran EBF is 53.1% in 2016 and CBF at one year is 84.2% and at 2 years is 51%. These rates have remained unchanged over the past two decades. EIBF is 68.7% while Baby-friendly hospitals that were accredited were 466 out of a total 566 hospitals. The low EIBF rates are mainly due to lack of control over the private sector. ISSS at 6-8 months is 75.9%. Maternity leave has increased to 24 weeks (6 months), paid leave.

In Pakistan 45% of children aged under-five are stunted and 58.8% suffer from anemia. EIBF is on the decline (10.6%) and CBF for one year is 65.6% and for two years is 34.5%. One third of infants are offered bottle feeds, higher education and marketing are predisposing factors. In a country with the highest population in the region there are only 75 BFH of which 52 are present in Sindh which is the third largest province in Pakistan but ranks second by GDP second to Punjab. Maternity leave is 12 weeks fully paid leave in the public sector, with six weeks of compulsory maternity leave in all workplaces. This leave is offered to mothers and not to breastfeeding babies. There are no rights to breastfeeding babies although Islam is the predominant belief. The Quran repeatedly emphasized that breastfeeding for 2 two years is the norm standard for feeding babies, and that she needs to be adequately supported by those who are responsible for the child during breastfeeding financially, morally and tangibly.

Complementary feeding in Pakistan is poor and can explain the high rates of stunting and wasting despite a breastfeeding mean duration of 17 months. ISSS is 66.9%. MAD is low at 14.8% mostly due to the very low MDD (17.8%) compared to the MMF (62.7%). These are lower in rural, illiterate and poor populations. Disparities between provinces can be used as models for success stories in IYCF practices.

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المقال الخامس: أنماط الرضاعة الطبيعية فى بلدان وسط أسيا بإقليم شرق المتوسط

الملخص و الاستنتاجات

تتضمن بلدان وسط أسيا لإقليم شرق المتوسط لمنظمة الصحة العالمية الدول الآتية:أفغانستان وايران وباكستان وتنفرد هذه المنطقة بأعلى كثافة سكانية إذ أن باكستان بحد ذاتها هى خامس دول العالم كثافة فى عدد السكان ولهذا فإنها تمثل عباً كبيراً على المنطقة عند وضع استراتيجيات تحسين التغذية ، وبالأخص أن المنطقة يغلب عليها الطابع الأسيوى وهو يختلف عن منطقة البحر المتوسط والدول الإفريقية ويصعب توحيد الاستراتيجيات عند وجود مفارقات ثقافية كبيرة بين الدول فى المنطقة وخاصة أن هذه الدول لديها لغات مختلفة وليست عربية كما هو الحال فى غالبية دول المنطقة ولكن لحسن الحظ أن جميع هذه الدول تتوحد تحت لواء ثقافة الكتب السماوية وبالأخص الإسلام والمسيحية واتباع سنة سيدنا محمد ﷺ وسيدنا عيسى عليه السلام ولهذا يجب أن تكون هذه الكتب السماوية جزءاً لا يتجزأ من استراتيجيات التغذية والصحة فى حياة من يعيشون فى هذه المنطقة الطاهرة القدسية.

فى أفغانستان تبلغ ممارسة الرضاعة الطبيعية المطلقة 43.3 في المائة وتكون أعلى فى الأمهات المتيسرات والأميات وهذه مفارقة غريبة تختلف عن كل ما شاهدناه فى الدول الأخرى بالمنطقة ، كما أن الرضاعة الغالبة كانت 69.2 في المائة و مواصلة الرضاعة الطبيعية لعام من العمر بلغت 87.8 في المائة ولعامين 69.2 في المائة ، ويرجع ذلك إلى أن نصف المواليد فقط (53.6%) يتعرضون للدعم فى البداية المبكرة فى الإرضاع من الثدي وأن الثلث يتعرضون إلى أغذية وسوائل قبل البدء بالرضاعة.

فى **أفغانستان** تبلغ نسبة معدل إدخال الأغذية التكميلية فى الموعد السليم أى عند عمر من 6-8 شهور 61 في المائة وذلك حسب المسح القومي فى 2015 ولكن مؤشر الحد الأدني لتواتر الوجبات كان 50.9 في المائة ومن و مؤشر الحد الأدني لتنوع الغذاء فكان 22.1 في المائة وهذا يتسبب فى ارتفاع التقزم بنسبة 40.9 في المائة على الرغم من أن معدلات مواصلة الرضاعة الطبيعية عالية.

فى **ايران** تبلغ نسبة ممارسة الرضاعة الطبيعية المطلقة 53.1 في المائة فى المسح القومى فى 2016 كما أن نسبة الأمهات اللاتي تواصلن الرضاعة الطبيعية لمدة عام كامل تبلغ 84.2 في المائة ولعامين 51 في المائة ولم تتغير هذه المؤشرات على مدار عقدين من الزمن . كما أن مؤشر البداية المبكرة بالرضاعة الطبيعية كان 68.7 في المائة ، والمستشفيات الصديقة للطفل بلغت 466 مستشفى من مجموع 566 مستشفى ولادة . أما بالنسبة لممارسات التغذية التكميلية فى ايران فإن 75.9 في المائة يدخلن الوجبات فى الموعد السليم أى عند عمر 6-8 شهور. وتمنح الأمهات العاملات فى ايران 6 شهور أجازة وضع مدفوعة الأجروهى من أولى الدول فى المنطقة التى تمكنت من وضع هذا التشريع وتفعيله.

فى **باكستان** تسود ظاهرة سوء التغذية فى الأطفال دون الخامسة من العمر بشكل واضح إذ يبلغ التقزم 45 في المائة والأنيميا 58.8 في المائة في هذه الفئة العمرية. ويرجع ذلك إلى تدني فى ممارسات تغذية الرضع إذ أن معدلات الرضاعة الطبيعية المطلقة من الولادة إلى نهاية خمس شهور من العمر قد انخفضت من 15 في المائة فى المسح القومي فى سنة 2011 إلى 10.6 في المائة في 2015 ، و يسود نمط الرضاعة الطبيعية الغالبة فى حوالي نصف الأطفال الرضع ، كما أن مواصلة الرضاعة الطبيعية في السنة الأولى تبلغ 65 في المائة أما في السنة الثانية من العمر فهى تتدنى إلى 34.5 في المائة ، كما تزداد هذه المؤشرات سوءاً مع ارتفاع مستوى المعيشة ومستوى تعليم المرأة والحياة المدنية نتيجة التعرض إلى التسويق لمنتجات ألبان الأطفال، كما أن أكثر من ثلث الأطفال تتعرض إلى زجاجات الارضاع. وللأسف فإن هناك فقط 75 مستشفى صديقة للطفل منهم 52 فى منطقة سندهاى. كما أن الأجازة التى تمنح للأم الحامل والمرضع لا تتعدى 3 شهور مدفوعة الأجر بالكامل ولكنها لا تمنح لارضاع الطفل ولكن لراحة الأم فليس هناك حقوق لإرضاع الطفل رضاعة طبيعية على الرغم من أنه من التشريعات الإسلامية تمثل أساس وقوام هذه الدولة وقد حث الدين مراراً وتكراراً على حق الطفل في الرضاعة من لبن الأم لعامين وأنه يجب توفير الدعم المناسب والكامل للأم من قبل المسؤلين عنها (الحكومة ومكان العمل والأهل) للاستمرار بالرضاعة الطبيعية لعامين.

وقد أظهرت المسوح القومية وفى **باكستان** تدني في مؤشرات التغذية التكميلية وعلى الرغم من 66.9 في المائة يدخلون الوجبات التكميلية في الموعد السليم عند عمر (من 6 إلى 8 شهور) ، و لكن هناك تدني في مؤشر الحد الأدنى للنظام الغذائى المقبول بنسبة 14.8 في المائة وهو أقل من المستويات المقبولة دولياً والتى يجب أن لا تقل عن 20 في المائة ويرجع ذلك إلى تدني فى مؤشر الحد الأدنى لتنوع الغذاء والذى يبلغ 17.8 في المائة بالمقارنة إلى مؤشر الحد الأدنى لتواتر الوجبات والذى يبلغ 62.7 في المائة . ويعتبر انتشار الفقر والأمية من أكثر العوامل المؤثرة في انخفاض هذه المؤشرات ، غير أن هناك مفارقات كبيرة بين المناطق فى باكستان ولذلك فإن الاستفادة من قصص النجاح يمكن أن تكون بمثابة قدوة أو نموذج للمناطق الأخرى التى لديها مؤشرات متدنية.

Article VI

Status of Breastfeeding in Countries with Cross-cutting Cultures with the Eastern Mediterranean Region

Azza Abul-Fadl, Samaah Al-Yassin, Ayoub Al-Jawaldeh

Overview

In this article we review infant feeding status of countries that do not belong to the Eastern Mediterranean region (EMR) but share some common cultural backgrounds with the EMR countries. They include Algeria, Mauritania, Bangladesh and Indonesia. These countries have cross cutting cultures with the EMR countries and can be used to gain a deeper perspective of the status and trends on the nutritional and feeding practices of infants and young children from the cultural perspective.

Algeria is included as an Arab state and shares the same culture as the other North African countries, but it belongs to the AFRO region of the WHO and the Middle East (MENA) region of the UNICEF. Mauritania is another country with common similarities to the North African countries but it belongs to the AFRO region of WHO and West African region of UNICEF.

Bangladesh and Indonesia are included from the Asian side as Bangladesh borders with central Asian countries of EMRO and the Indonesia is influenced by the Islamic beliefs as the EMR countries and their success stories that can be used for extrapolation purposes.

VI.1. Algeria

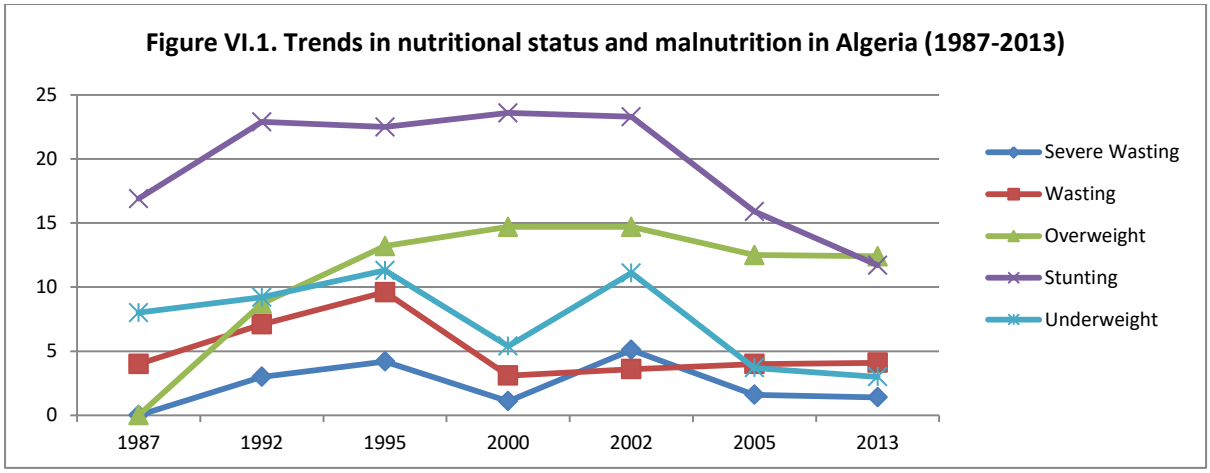
Background

Algeria is the largest country in Africa and is estimated to have a population of around 40 million. The public health care system is Algeria is freely accessible to all citizens and is financed by the government. Algeria is emerging from decades of internal conflict that have left the country in deep poverty and unemployment particularly in the rural areas. The World Food programme (WFP) has played an important role in providing food subsidies to the deprived areas in Algeria. Life expectancy in Algeria in males is 70.3 years and in females is 73.5 years. Non-communicable disease (NCD) is a rising priority with over 1.6 million cases of Diabetes mellitus (DM) in 2014 and 14,044 adult deaths. DM has risen from 6.8% in 1990 to 13.8% in 2010. Obesity is a major risk factor of NCD and has increased to 21.2% and is accompanied by low consumption of fruits and vegetables and high consumption of sugars and fat.

However infant mortality rates have decreased from 60/1000 live births in the previous decade to 22.6 in 2012 and 15.5 in 2015.

Trends and status of Infant and Young Child Nutritional Status

The remarkable feature in the trends of malnutrition in Algeria is the sustained high stunting rates from 1987 to 2002 that have shown a marked decrease from 2002 to 2013. Underweight and wasting have also declined.

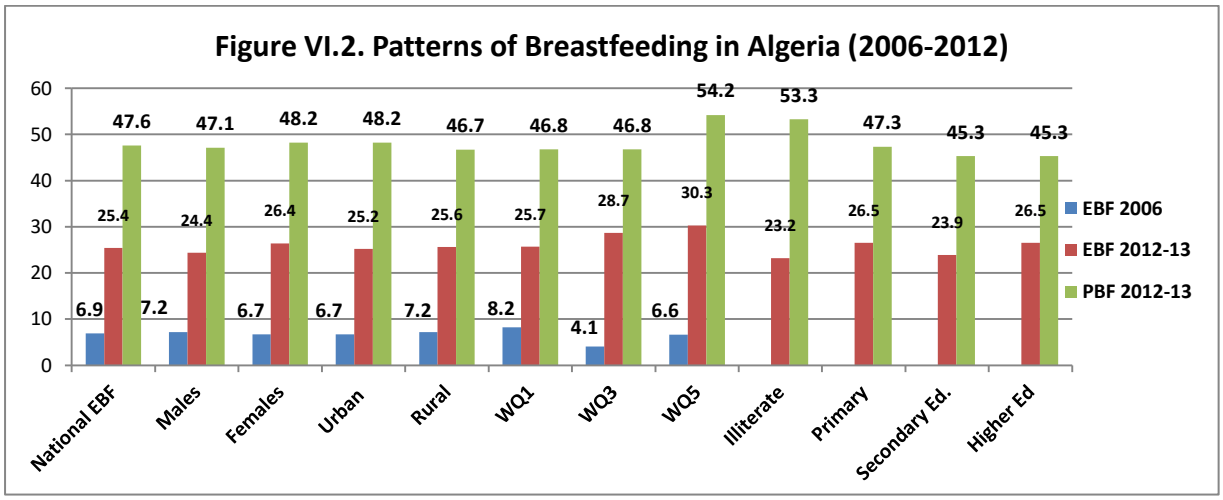


Source: UNICEF Global data base, 2018

However, this was accompanied by an increase in overweight over the entire period, which can explain the increasing rates of DM in the country. Moreover, from our previous review we can deduce that stunting in countries affected by depression from poverty or conflicts or chronic emergencies are due to hunger and chronic starvation, while stunting in countries recovering from conflict and undergoing development is due to overweight and obesity. This can explain why these countries stagger in their recovery from stunting and stunting rates tend to plateau once the overweight takes over as shown in figure VI.1.

Trends and Status of Infant & Young Child Feeding:

1. Breastfeeding



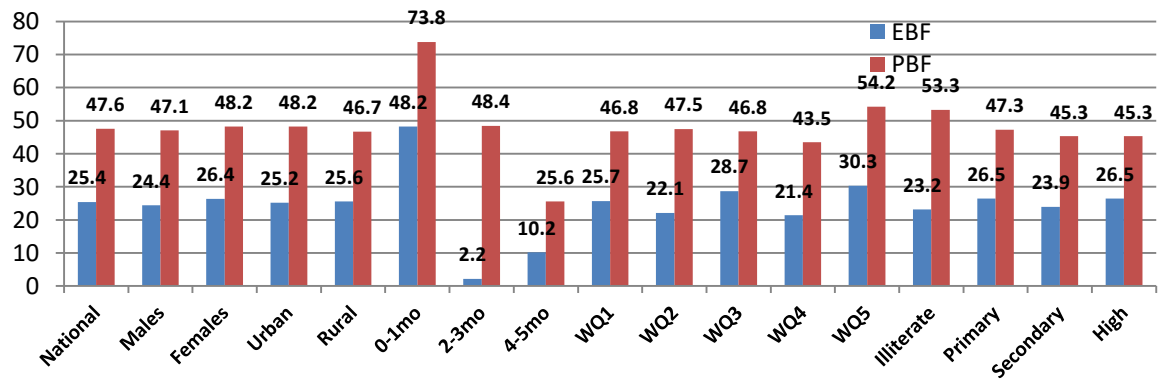
Source: UNICEF Global database, 2018.

Exclusive (EBF) and predominant breastfeeding (PBF): Trends in both EBF and PBF have increased from 2006 to 2012. National point estimates of EBF in 2012 was 25.4%. Both EBF and PBF are particularly low in the early months of life with EBF being 2.2% at 2-3 months is shown in figure (VI.3).

In the 2012 national surveys EBF and PBF were highest in the richest (30.3% and 53.3% respectively). However, EBF increased by level of education as it was highest in the highly educated (26.5%), whereas PBF was highest in the illiterate (54.2%) and lowest in the rural (46.7%), poorest (46.7%) and highly educated (45.3%). These paradoxical findings between EBF and PBF by education may be due to traditional misbeliefs and misinformation from marketing and poor medical practices in the

field of lactation management. Such findings are different from the pattern seen in the EMR countries and indicate that the AFRO region may be influencing these practices by more effective interventions. On the other hand, the high EBF in the highly educated may be related to the increased female enrollment in secondary education (56.7%) and in universities (53%), indicating that the trends to increase maternal education could be the underlying cause for improved infant feeding practices. Empowering women through education and integration of health awareness programs in their educational programs could be a key factor for such findings (Algeria report presented to 23 General Assembly in Beijing, 2000).

Figure VI.3. Comparison of patterns of exlusive vs. predominant breastfeeding



Breastfeeding continuity

The national survey in 2012 showed that the national rates for continued breastfeeding (CBF) for 0-23 months was 53.4% being higher in females (55.6%) than in males (51.6%). There was no difference in continuity rates between mothers living in urban and rural areas (53.4% vs. 53.3% respectively).

Continuity was highest the early months decreasing by one half at one year. By two years (22-24 months) only 22.7% were still breastfeeding.

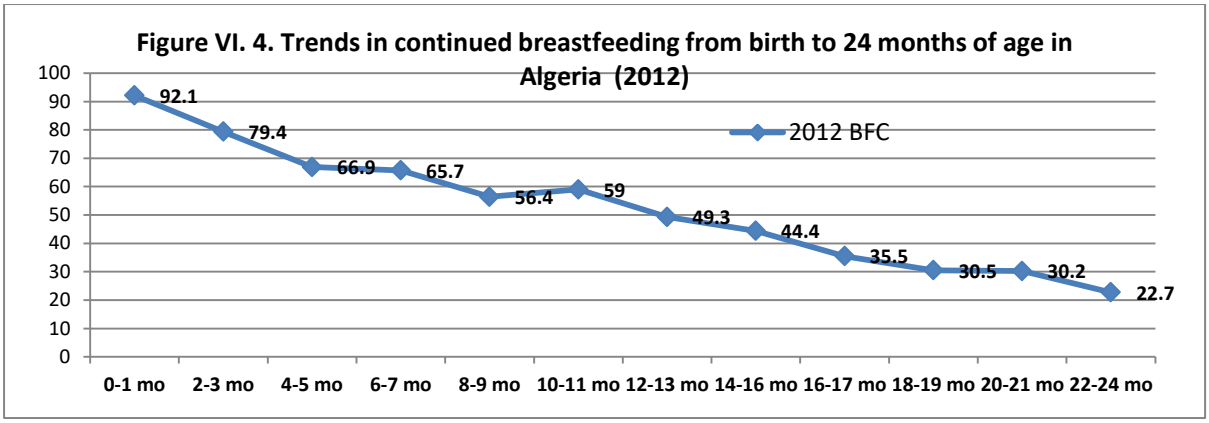
Baby-friendly Hospital practices

The national rates of **early initiation of breastfeeding (EIBF)** have decreased from 49.5% in 2006 to 35.7% in 2012. The latter may represent methodological interpretation as the recommendation for EIBF changed from direct initiation on breast before 2006 to initiation through skin-to-skin after 2006. It was higher in rural (36.4%) than in urban areas (35.4%). It decreased with higher wealth quintiles from 37.2% in the poorest (WQ1) to 30% among the richest mothers in WQ5, indicating the possibility that those in higher wealth quintiles seek private practice that delays their EIBF rates.

By education level the highest EIBF was among the illiterate mothers (43.3%) and lowest was in the highly educated mothers (29.9%). This may probably reflect the tendency for illiterate women to have home deliveries that permit EIBF. It was 35.0% and 34.8% in those with primary and secondary education. The latter and former probably reflect hospital practices and may be related to high cesarean section deliveries, medicated deliveries and hospital routines that separate mothers from babies.

According to the IBFAN report of on the situation of infant and young child feeding in Algeria prepared by GIFA in May 2012, there are currently only 2 hospitals designated as Baby-friendly. According to the African Charter on the rights and welfare of the child for Algeria, that was ratified in July, 2003, the initial report has announced that it is targeting 104 maternity hospitals to become Baby-friendly.

(https://acerwc.africa.uploads.2018/04).

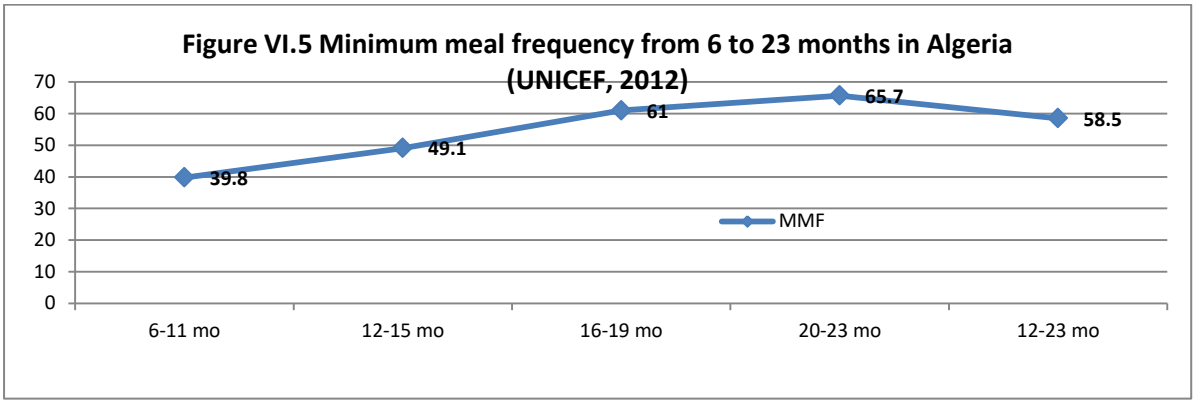


Complementary Feeding

The timely ISSS at 6-8 months was 77.2% in 2012. ISSS was lower in urban (76.5%) vs. rural (78.2%). ISSS decreased with increasing wealth index from 71.5% in WQ1 to 81.5% in WQ4 and 84.8% in WQ5. ISSS was higher among mothers with primary education (80.7%) and lowest in the illiterate (66.4%), while it was 78.1% and 77% among women with secondary and higher education respectively (UNICEF, 2018).

The minimum meal frequency (MMF) was 52.0%. MMF was lower in females (50.9%) than males (53.2%). MMF was higher in urban (54.1%) than in rural areas (48.8%).

MMF was lowest between 6 to 11 months (39.8%) and increased to a peak of 65.7% at 20-23 months of age as shown in figure below. This was the same pattern seen in all the EMR countries indicating that low MMF is what maintains the high CBF for one year. Thereafter when MMF increases the CBF falls steeply.



By wealth quintile MMF was highest in those in WQ5 56.1% and lowest at WQ1 (48%). The latter are those who have high CBF at one year.

By education MMF was lowest in the illiterate 47.4%, being 51.4% in those with primary education, 52.3% in those with secondary education and 61.5% in those with higher education.

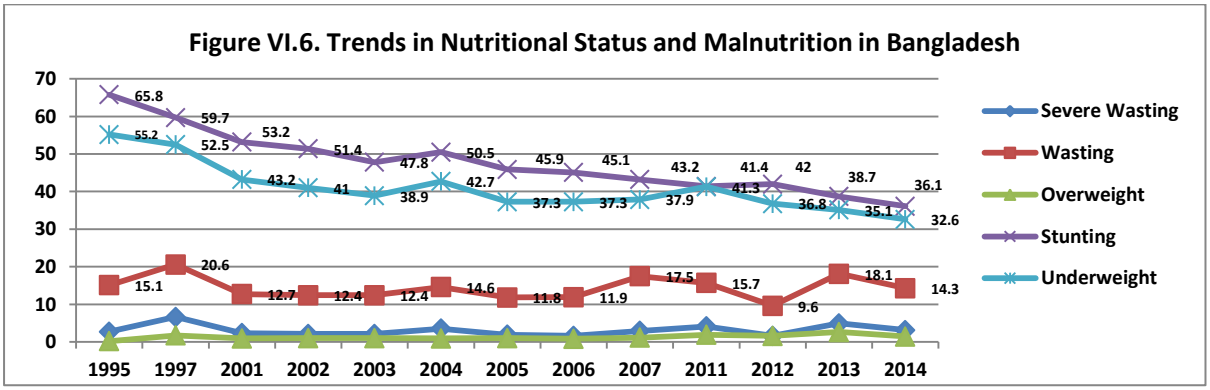
Maternity support in Algeria:

In Algeria maternity leave is granted for 14 weeks and women are entitled to 100% of their regular wage during their maternity leave. Pregnant employees are also eligible to get a 14 day paid maternity leave prior to delivery. Fathers are eligible to three days of paternity paid leave. This is the general trend in all EMR countries too.

VI.2. BANGLADESH

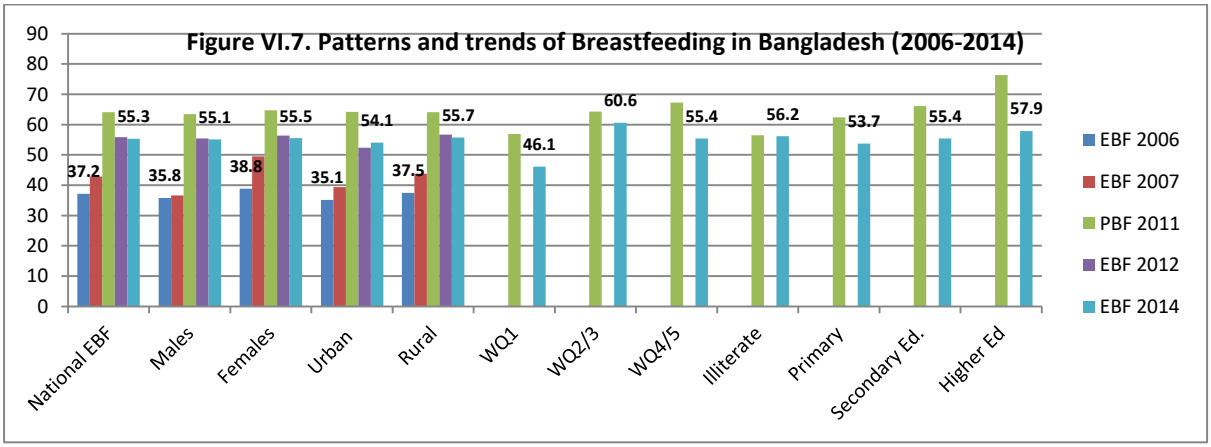
Overall population in Bangladesh is 166, 368 million, with 35.9% living in urban areas. Poverty is estimated at 18.5 (ppp< $1.9 per day). Access to basic sanitation is 47%. Child immunization is 97% and care seeking behavior for suspected pneumonia is 42%. Prevalence of high blood pressure is 25% and tobacco use is 35%. Access to essential medicine is 65%. Maternal mortality ratio has decreased from 399 in the year 2000 to 176 per 100,000 live births. Births attended by skilled personnel have increased from 18% in 2007 to 42% in 2014. Mortality of children under-five (CU5) has decreased by one third, from 88/ 1000 live births in 34/1000 live births in 2016, while infant mortality decreased by one half, from 43 to 20 per 1000 live births.

Trends and status of Infant and Young Child Nutritional Status



Trends and Status of Infant & Young Child Feeding:

1. Breastfeeding patterns



Predominant breastfeeding (PBF):

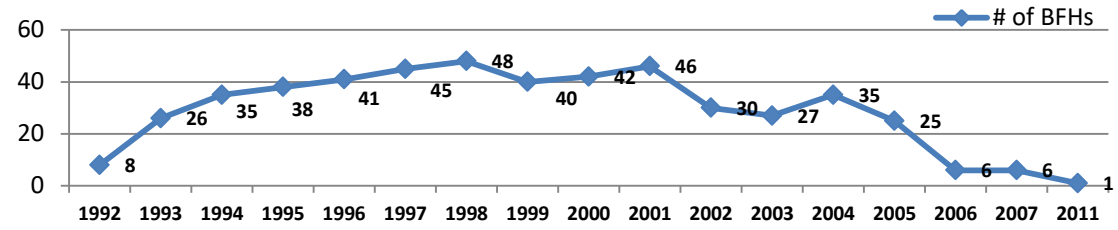
PBF rates decreased from 76.7% in 2011 to 69.7% in 2014. The decrease was consistently more in the males (75.6%) vs. females (77.5%), (***MICS, 2011***) and 68.8% in males vs. 71.2% in females (***MICS, 2014***). Again the decrease in 2011 and 2014 was more in urban (75.5% and 68.8%) vs. rural (77.0% and 70.0%) respectively. Trends by age group showed that at 0-1 months PBF was 90.3% and 87.1% in 2011 and 2014 respectively, decreasing to 83.5% and 76.6% at 2-3 months and reaching 53.8% and 51.8% at 4-5 months in the years 2011 and 2014 respectively. There were no differences in the practice of PBF by level of education being 71% in the illiterate, 65.7% in those with primary education, 71.8% in those with secondary education and 69.9% in the highly educated. The gap between EBF and PBF was very narrow indicating that efforts for promoting EBF were working effectively and reaching out to the community.

Baby-friendly Hospital practices: Early Initiation of breastfeeding (EIBF)

EIBF trends have increased from 47.1% in 2011 to 57.4% in 2012 and then decreased to 50.8% in 2014. It was similar in both males (50.7%) and females (50.9%). But it was higher in rural (52.8%) than in urban areas (54.3%). There was also a decreasing trend with wealth quintiles being 56.9% in the poorest (WQ1) decreasing to 44% in WQ5. Also it decreased with increasing level of education from 55.6% in the illiterate (reflecting home deliveries) and decreasing to 54.3% in those with primary education, 49% in those with secondary education and 43.3% in those with higher education. Hence both WQ and level of education had a negative effect on EIBF indicating that these mothers are exposed to medicalized hospital services during labor that interfere with EIBF.

There are currently 499 Baby-friendly hospitals in Bangladesh out of the 600 maternity services. These include 14 medical colleges, 54 district hospitals, 40 private and specialized hospitals and 330 Upazila Health Complexes, 61 other maternity facilities. BFHI evaluations were carried out in 1999 and again in 2003 and 2004. In 2006 the situation of BFHI was deteriorating. Efforts for revitalization are ongoing.

Figure VI.8 Designated Baby-friendly hospitals (BFHs) in Bangladesh from 1992 to 2011

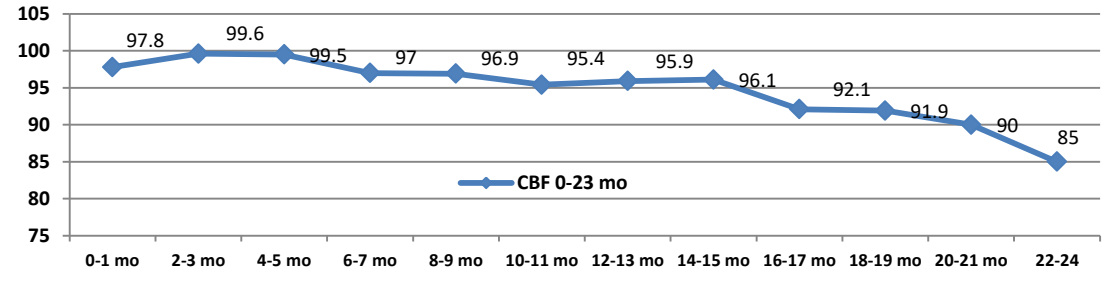


(Source: Online presentation by Soofia Khatoon, Bangladesh Breastfeeding Foundation: Revitalization of BFHI in Bangladesh)

Breastfeeding continuity

Breastfeeding continuity rates in Bangladesh are the highest in the region and probably in the world at 94.7% being higher in males (95.2%) vs. females (95.2%) and in rural (95.5%) vs. urban (92.4%). At 22-24 months of age 85% are still breastfeeding.

Figure VI.9 Trends in continued breastfeeding in Bangladesh 0-23 months (MICS, 2014)



Complementary Feeding

The timely introduction of solid, semi-solid and soft foods (ISSS) at 6-8 months was 64.7% in 2014. ISSS was lower in urban (62.6%) vs. rural (65.5%). ISSS was lowest in WQ1 (61.7%) and WQ5 (58.6%) vs. 66.5% in WQ4. ISSS was lowest in the highly educated (58.2%) and illiterate (61.2%) and secondary education (62.1%) compared to those with primary education (74.1%).

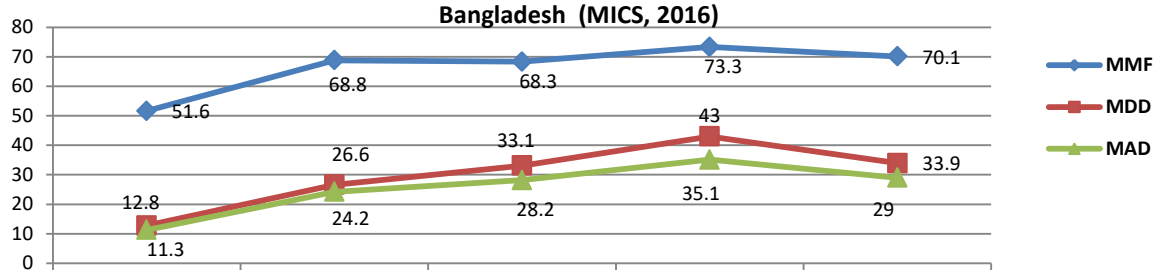
The minimum meal frequency (MMF) was 63.6%. MMF was lower in females (62.5%) than males (64.6%). MMF was higher in urban (53.1%) than in rural areas (39.9%). By wealth quintiles and education it was lowest in the poorest and illiterate (55.2% and 54.5% respectively) and highest in WQ5 and highly educated (68.9% and 72.8% respectively). **Minimum dietary diversity (MDD) and Minimum acceptable diet (MAD)** were low (26.6% and 22.8% respectively) (***MICS, 2016***). MDD and MAD paralleled one another. This was also seen in all the previous EMR countries.

MDD and MAD were not different in males or females but were higher in urban (32.6% and 28.6% respectively) vs. rural communities (24.5% and 20.8% respectively). This is probably related to poverty as shown by the lowest rates of MDD and MAD in the WQ1 (16.9% and 14.3% respectively) and the illiterate mothers (14.1% and 15.6% respectively) compared to rich mothers in WQ5 (36.2% and 32.9%) and highly educated (45.6% and 41.7% respectively), (***MICS, 2016***).

Figure VI.10 shows the trends in MMF, MDD and MAD by age group in Bangladesh. Although MMF remains high throughout the first 2 years of life, MDD does not increase except late in the second year of life at 20 to 23 months, which could explain the persistent stunting in this population despite the high breastfeeding rates of continuity.

We believe that focus on MDD will be the future trend in improving infant and young child nutrition. However its link with CBF needs to investigated as the latter may play a role in the uptake and utilization of component in the diet and enhance diet diversity and reduce the side effects of newly introduced foods or food incompatible with the age of the infant.

Figure VI.10 Trends in Minimal Meal Frequency (MMF), Minimum Diet Diversity (MDD) and Minimal Acceptable Diet (MAD) by age group (6 to 23 months) in Bangladesh (MICS, 2016)



Maternity support in Bangladesh

The maternity leave policy for women in Bangladesh is 16 weeks with full payment. Recently the government has declared that it should be increased to 6 months. The law on maternity benefit is regulated by the Bangladesh Labour Act, 2006 under chapter IV called Maternity Benefit. A study by ***Faroque et al., (2013)*** showed that female employees working in NGOs got 3-4 months but many of them were not paid during their leave (27%) and many of them were expelled due to maternity leave (19%).

VI.3. Indonesia

Indonesia is a country of the region of South East Asia. It is challenged by its high population density of over 260 million. Life expectance is around 70 years which is lower than in countries as Egypt, Tunisia and Turkey. Chronic diseases mostly cardiovascular diseases (26%) and cancers (16%) are the fastest growing causes of death in the country. Diseases such as Tuberculosis, HIV-AIDS and Malaria are still high on the list.

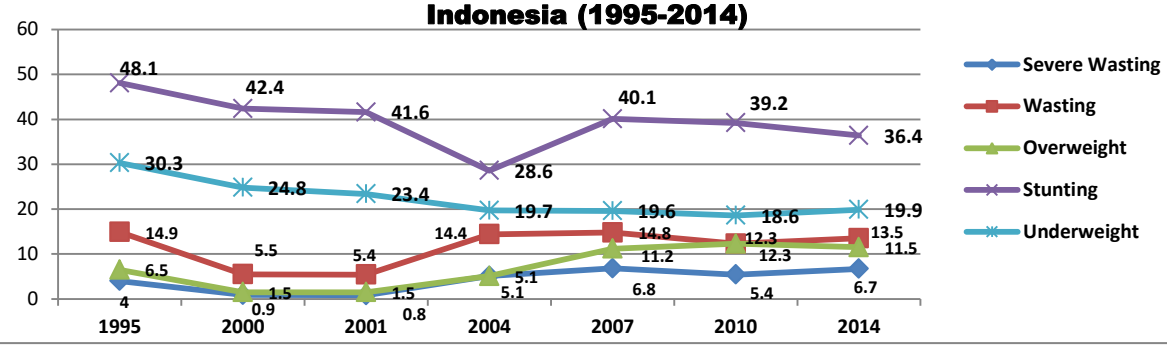
Infant mortality is around 23 per thousand. Diverse local beliefs strongly affect maternal and newborn care practices. Some religious communities are opposed to vaccinations. Smoking prevalence is high at 35%. While overweight is 27% and obesity 7%. There are 10 million cases of diabetes representing 6.5% of the population.

There are increases in the growth in expenditure in health to meet the challenge of health care coverage of such a huge population. Costs in health care have tripled over the past five years from seven billion in 2014 to 21 billion in 2019. Government expenditure has increased from 2.9% of GDP in 2014 to 3.6%, but it is still the lowest in the region.

Despite such challenges Indonesia has managed to struggle to improve its infant and young child feeding practices.

Trends and status of Infant and Young Child Nutritional Status

Figure VI.11 Trends in Nutritional Status and Malnutrition in Indonesia (1995-2014)



UNICEF Global database, 2018

Trends and Status of Infant & Young Child Feeding:

Exclusive (EBF) and Predominant breastfeeding (PBF)

A study by WHO (WHO Bulletin, 2014 volume 92(4):229-308) reported that the holistic approach of a combination of voluntary workers, traditional birth attendants, Muslim scholars and heads of villages, involved through advocacy, training, in media promotion, home visits, were effective in improving breastfeeding rates. They showed that this approach increased breastfeeding from 28% to 75.3% and from 14.6% to 24.2% and from 8.5% to 50.6% and from 3.7% to 37% in intervention cases vs. controls at 1, 8, 16 and 24 weeks.

Figure VI.11 Trends and patterns of exclusive and predominant breastfeeding in Indonesia (2007 and 2012)

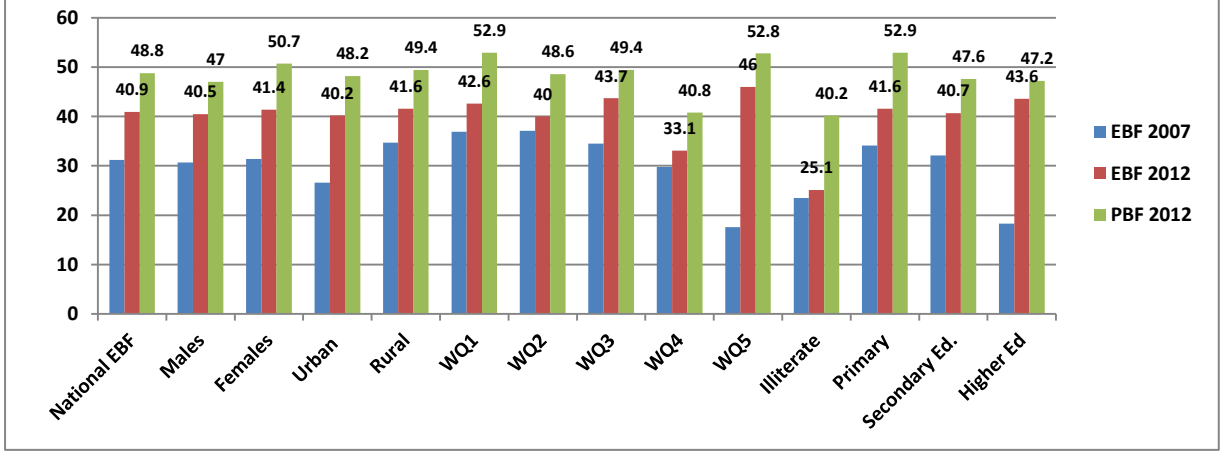
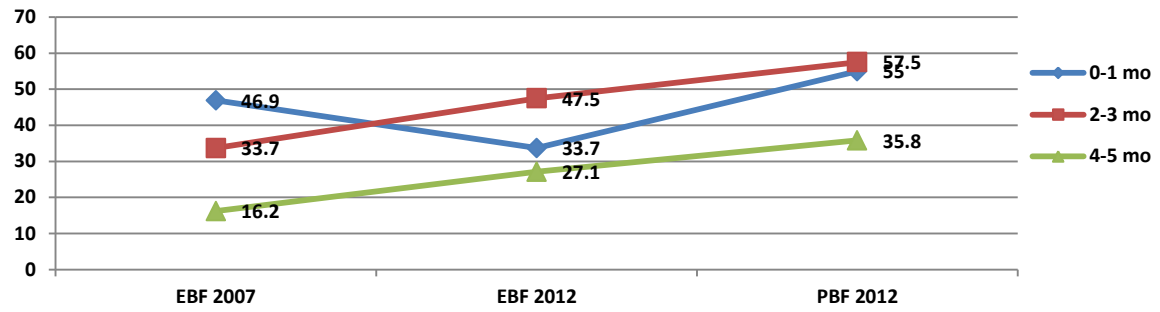


Figure VI.12 Trends in exclusive and predominant breastfeeding by age group in Indonesia (2007-2012)



Baby-friendly Hospital Practices

There are no Baby-friendly hospitals in Indonesia. The influence of marketing of breastmilk substitutes is high. Indonesia calls the BFHI "Mother and Baby-friendly Hospitals Initiative" and awards hospitals that do not deal with infant milk formula companies.

Early Initiation of breastfeeding

Figure VI.13 Trends in early initation of breastfeeding in Indonesia (1994-2012)

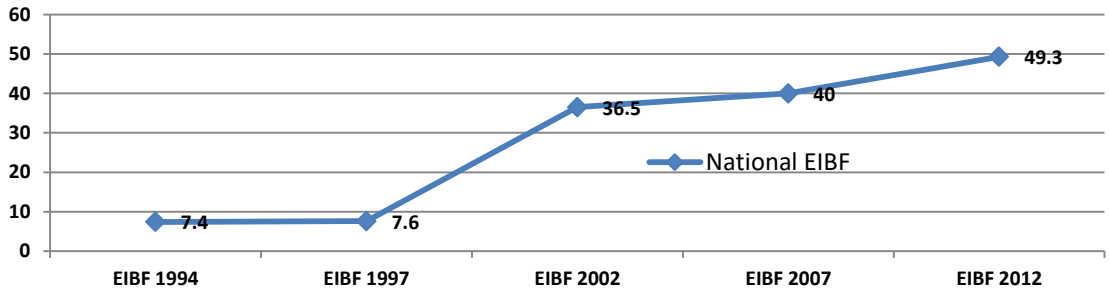
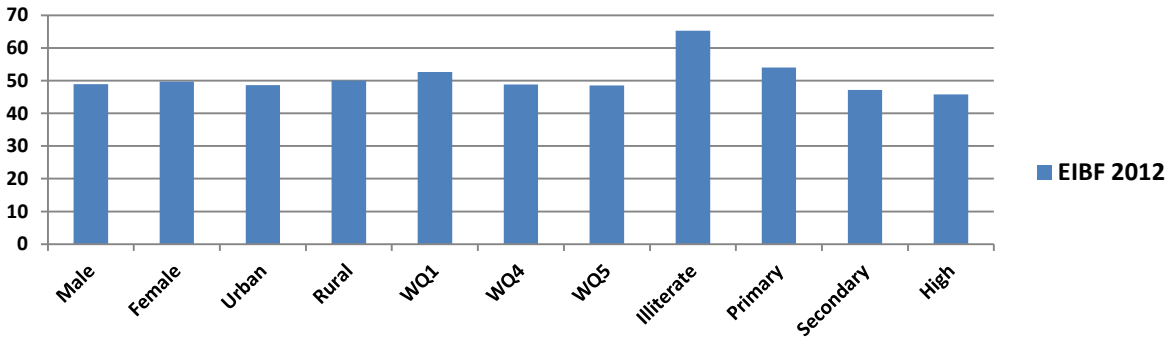
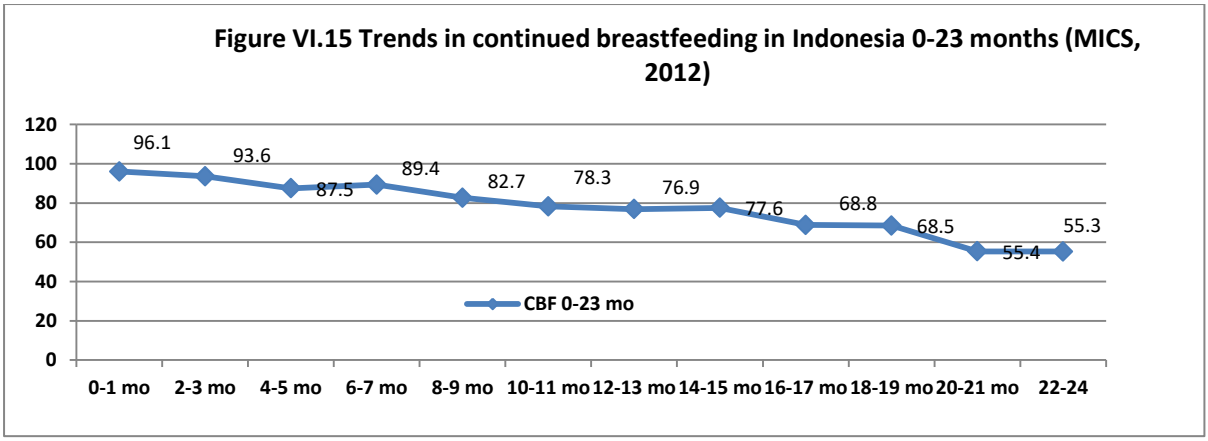


Figure VI.14 Patterns of early initation of breastfeeding (EIBF) in Indonesia (MICS, 2012)



Breastfeeding continuity:

CBF as shown in figure VI.15 remains high throughout the first two years of life. CBF is vital for food security to a country with such high poverty rates. The means by which such high rates are maintained deserve to be investigated and indicate the commitment of its population to meet its obligations by its Islamic teachings. However, lessons learnt from control of marketing and abidance to the Code could be useful to replicate.



Complementary Feeding

The timely ISSS at 6-8 months was 91.1% in 2012. ISSS was lower in urban communities (94.5%) vs. rural ones (87.4%). It was highest in those in the highest wealth levels (WQ5= 81.6%) somewhat lower in the poorest of populations (WQ1=81.6%). Mothers with no education were more timely in introducing solids and semi-solids (95.2%) compared to those with primary, secondary of higher education (87.9%, 93% and 91.2% respectively).

The minimum meal frequency (MMF) was 66.1%. MMF was lower in males (65.8%) than females (66.4%). MMF was higher in urban (70.6%) than in rural mothers (61.7%).

MMF increased by wealth quintile from 59.4% in WQ1 to 66.0% WQ4 and 73.4% in WQ5. MMF was highest in the highly educated (74.3%) and 67.4% in those with secondary education but lowest in those whose mothers had primary education (60.2%) or no education (62.1%).

Minimal diet diversity (MDD) in Indonesia was 52.6% at national level. MDD was lower in males (51.4%) than females (53.9%). MDD was higher in urban (59.5%) than in rural mothers (46.0%).

MDD increased by wealth quintile from 35% in WQ1 to 58.30% WQ4 and 69.5% in WQ5.

MDD was highest in the highly educated (66.5%) decreasing to 55.4% in those with secondary education and primary education (43.4%) but lowest in the illiterate mothers (18.9%).

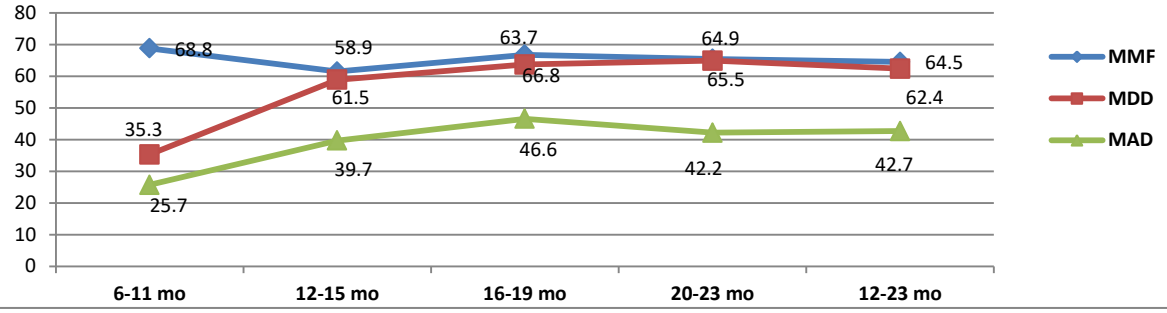
Minimal Acceptable diet (MAD) was 33.6% at national level. MAD was lower in males (35.1%) than females (38.2%). MMF was higher in urban (42.7%) and much lower in the rural mothers (30.7%).

MAD increased by wealth quintile from 23.2% in WQ1 to 39.4% WQ4 and 51.7% in WQ5. This shows that poverty influences optimal complementary feeding practices.

MAD was highest in the highly educated (50.3%) and 38.5% in those with secondary education decreasing to 28.6% among mothers with primary education but being much lower in those whose mothers were illiterate (10.5%), indicating that education plays an extremely important role in empowering women living in countries with emerging stages of development.

Education of women combined with awareness and social support are the most effective strategies for improving the health and nutritional status of our children. Problems in our region can be summed up by lack of education. The strength of the “Umma” comes from literacy as stated repeatedly in Quranic texts. As from literacy comes knowledge and with knowledge comes conviction and change in behavior, attitude from analytical thinking and the ability to make sound decisions that influence health, nutrition and survival of communities.

Figure VI.16 Trends in Minimal Meal Frequency (MMF), Minimum Diet Diversity (MDD) and Minimal Acceptable Diet (MAD) by age group (6 to 23 months) in Indonesia (MICS, 2012, UNICEF, 2018)



Maternity support in Indonesia:

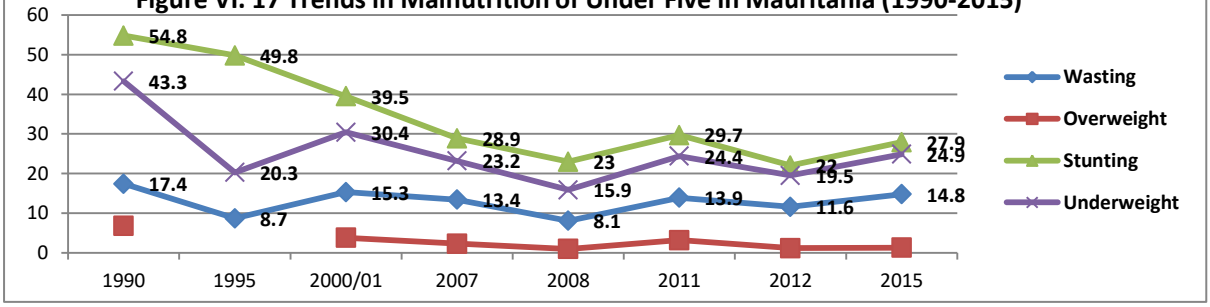
Working mothers in Indonesia are entitled to 45 days of antenatal leave (estimated by an obstetrician or a midwife) and another 45 days after birth or a total of 90 days. Maternity leave can be extended in case of complications or medical reasons. Indonesian law mandates that businesses give three months fully paid maternity leave and medical reimbursement during maternity leave. Fathers are entitled to two days of paternity leave. Female employees can breastfeed their baby any time during office hours if necessary.

VI.4. Mauritania

Mauritania is in West Africa and borders the North Atlantic and has a small population of 4.3 million in 2016 with a life expectancy of 63 in males and 65 in females. Despite its small population it is challenged by its high morbidity and mortality rates. Infant mortality has decreased from 82 in 1990 to 65 per 1000 live birth in MICS of 2012 and is down to 51.9 per 1000 in 2017. HIV prevalence is 0.4% in 2012. Immunization coverage is high is lowest for MMR (75%) and highest for BCG and DPT1 (95%). Youth literacy rates for males are 71.6% and for females is 66.2%. Primary school survival to last grade is 78%. Secondary school attendance is 26% for males and 22% for females in 2008-2012. (UNICEF State of the World's Children, 2015) .

Trends and status of Infant and Young Child Nutritional Status

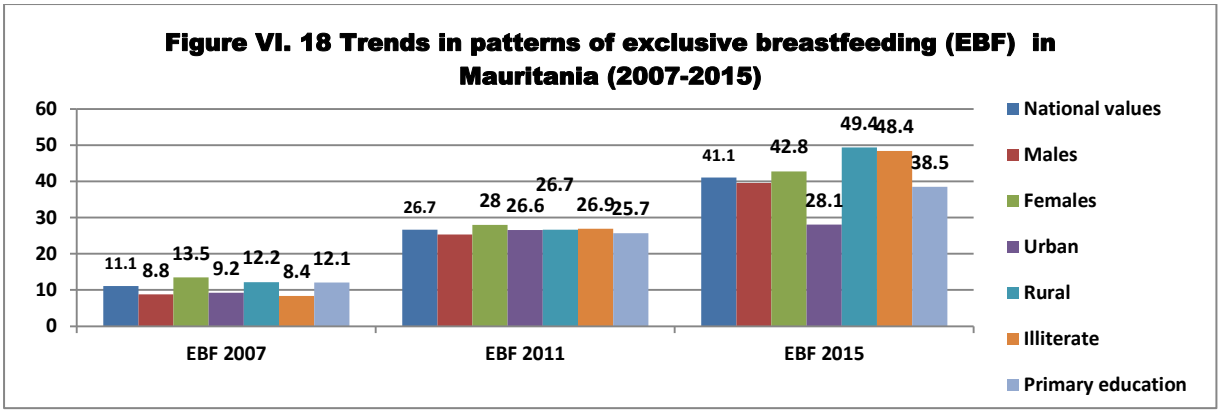
Figure VI. 17 Trends in Malnutrition of Under Five in Mauritania (1990-2015)



Trends and Status of Infant & Young Child Feeding:

Exclusive breastfeeding (EBF):

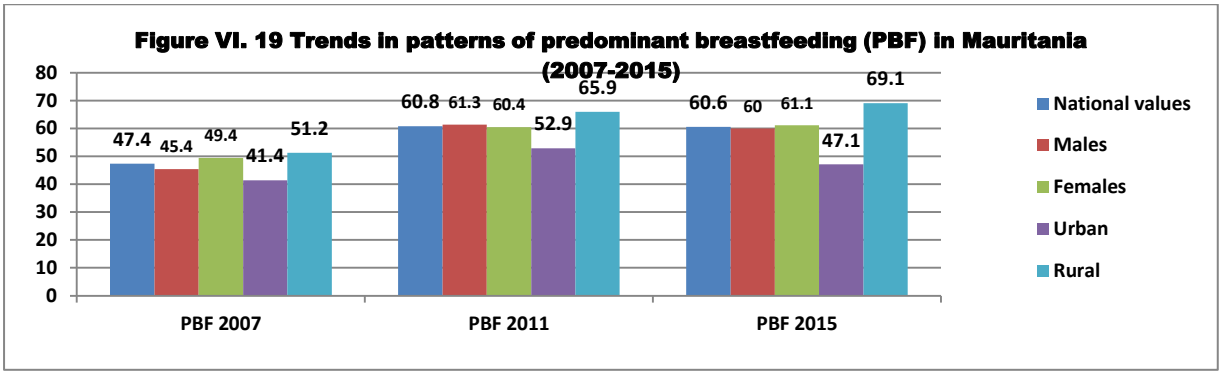
EBF increased from 11.1% in 2007 to 41.1% in 2015 (MICS, 2015). The increase was much higher in rural areas (from 12.2% in 2007 to 49.4% in 2015) compared to urban areas (from 9.2% in 2007 to 28.1% in 2015).



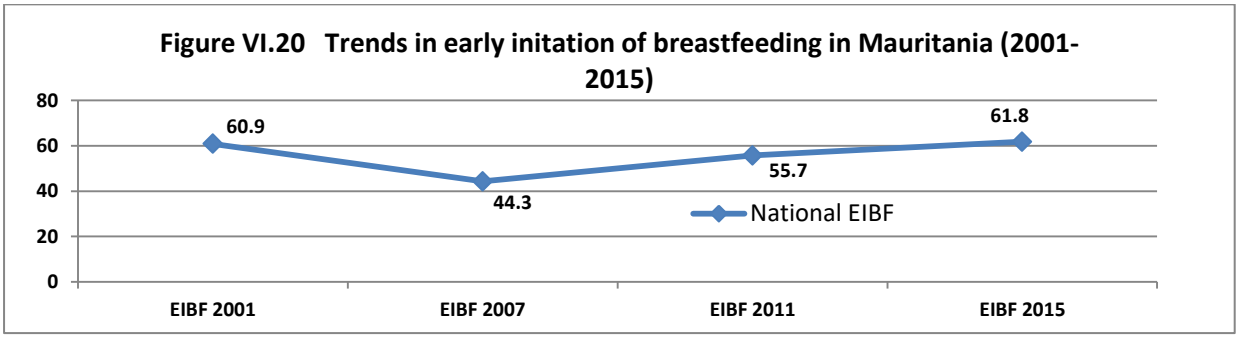
Source: Global data reanalyzed from national surveys by UNICEF in 2018

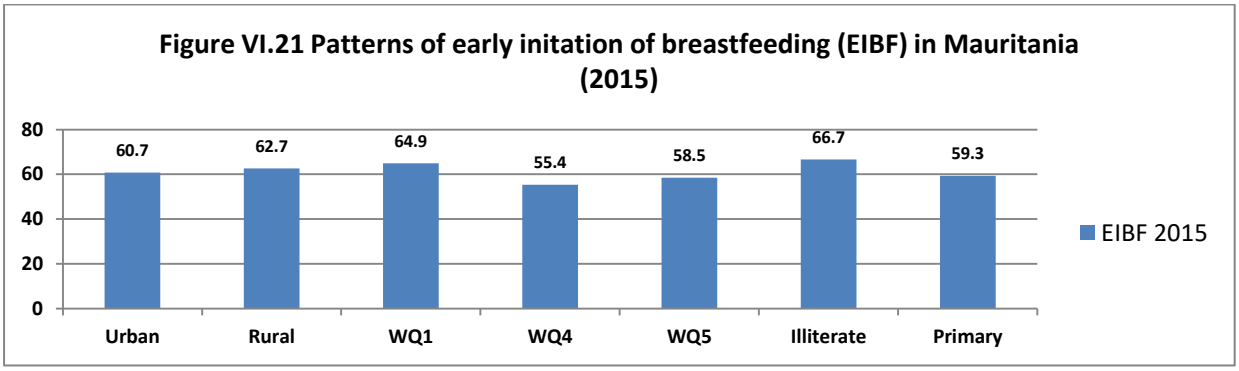
Predominant breastfeeding (PBF)

PBF in 2015 was higher than EBF (60.6%). It was much lower in males than females (60.0% vs. 60.0% respectively). It was much higher in rural than in urban communities (69.1% vs. 47.1% respectively).

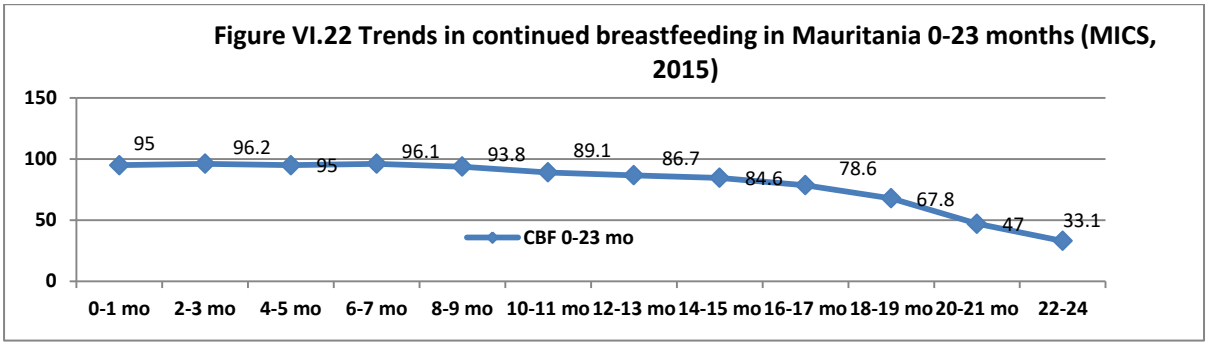


Baby-friendly Hospital Practices: Early Initiation of breastfeeding (EIBF)





Breastfeeding continuity



Complementary Feeding

Percentage of children receiving solid, semi-solid or soft foods (ISSS) at 6-8 months was 66% in 2015. ISSS was lower in urban communities (78.5%) vs. rural ones (54.6%). It was highest in those in the highest wealth index (WQ4= 86.7%, WQ5= 74.3%) and much lower in the poorest of populations (WQ1=54.5%). Mothers with some education (primary) were more timely in introducing foods at 6-8 months (73.4%) compared to those with no education (49.5%).

The minimum meal frequency (MMF) was 38.9%. MMF was lower in males (38.5%) than females (39.4%). MMF was higher in urban (44.3%) than in rural (34.2%). MMF was influenced by wealth and education: it increased by wealth quintile of mother from 36.7% in the poorest (WQ1) to 44.9% among WQ4 and 44.4% in WQ5. Also MMF was 31.2% among mothers with no education and 42.6% in those with primary education.

Minimal diet diversity (MDD) in Mauritania was 28.3% at national level. MDD was lower in males (26.7%) than females (29.8%). MDD was higher in urban (38.5%) and decreased by almost one half in rural areas (19.4%).

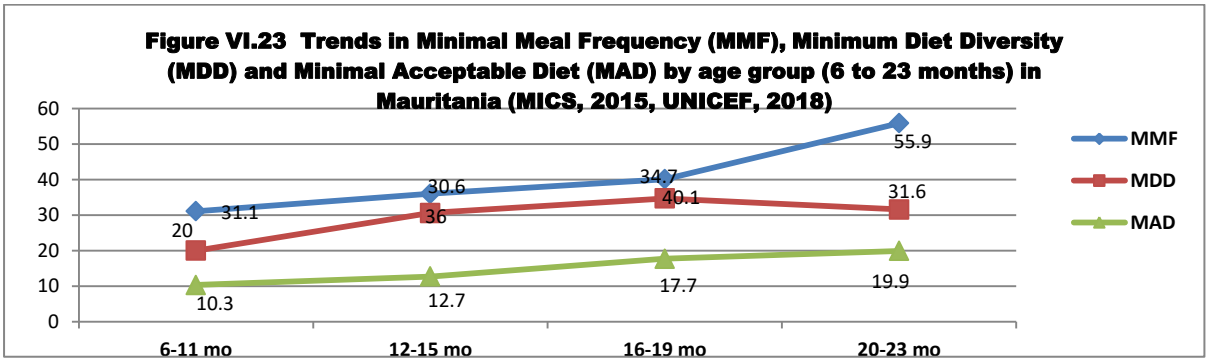
Minimum diet diversity (MDD) decreased by wealth quintile from a high of 45.4% in WQ5 and 35.1% in WQ4 to a very low of 14.1% in WQ1.

MDD was somewhat higher in mothers with primary education (27.8%) than in the illiterate mothers (23.5%).

Minimal Acceptable diet (MAD) was below the acceptable global values of MAD being 14.3% at national level. MAD was even lower in males (13.2%) than females (15.4%). MMF was higher in urban (21.2%) (Just above the acceptable global levels of 20%) and exceedingly low in the rural mothers (8.3%).

MAD increased by wealth quintile from 7.2% in WQ1 to 21.3% WQ4 and 22% in WQ5. This indicates that improving the standard of living can influence infant feeding practices.

MAD was higher in those with some education (primary=15.1%) and but much lower in those whose with no education (9.7%), indicating that education plays an important role in empowering women living in countries with in emerging stages of development.



Maternity support in Mauritania

Mothers are granted 16 weeks of maternity leave and fathers ten days paternity leave under Mauritanian Law. Maternity leave is fully paid by government.

V1.5 Summary and Conclusions

The countries discussed in this article were Algeria and Mauritania in Africa and Bangladesh and Indonesia in Far East Asia. These countries are not EMR countries and have different languages but share similar cultural backgrounds in language and beliefs as the EMR countries.

In Algeria EBF showed rising trends from 6.9% in 2006 to 47% in 2013. PBF was 47.6% in 2013. According to the latest national survey EBF was highest in the richest and highly educated. But PBF was highest in the illiterate mothers. CBF at two years was 22.7%. EIBF have decreased from 49.5% to 36.4%. The latter may represent methodological interpretation as the recommendation for EIBF changed from direct initiation on breast before 2006 to initiation through skin-to-skin after 2006. ISSS at 6-8 months was 77.2% in 2013. Also MMF was 52%. Maternity leave is granted for 14 weeks fully paid leave.

Bangladesh has shown a marked improvement in the rates of stunting and underweight over the past two and half decades. This could be attributed to the increasing rates of EBF from 37.2% in 1995 to 55.3% in 2014. Also CBF for two years are the highest among developing countries being 85% at age 22-24 months. One half of newborns initiate breastfeeding in a timely fashion. There are currently 499 Baby-friendly hospitals in Bangladesh out of 600 maternity services, although the rate of designated hospitals has decreased over the recent years, but there appears to be remarkable efforts by the government to support this initiative. Complementary feeding shows that although ISSS is 64.7% and MMF is 63.6% yet MDD and MAD were 26.6% and 22.8% respectively in 2016), being lowest in the poor and uneducated. The maternity leave policy for women in Bangladesh is 16 weeks with full payment and efforts are in progress to increase it to six months.

Indonesia has shown rising trends in both EBF and PBF to 40.9% and 48.8% respectively being unaffected by gender or residence, but EBF showed lower trends in the richer and more educated. CBF is 55.3% at two years. EIBF is 49.3% and has shown remarkable increase over time. ISSS at 6-8 months was 91.1% in 2012 with the MDD 52.6%, MMF 66.1% and MAD 33.6%. Working mothers in Indonesia are entitled to 45 days of antenatal leave (estimated by an obstetrician or a midwife) and another 45 days or the total 90 days after birth.

Mauritania has shown a recent rise in stunting rates to 27.9% which is accompanied by an increase in underweight to 24.9%, the high rates of illiteracy could be contributing factors. EBF has increased from (11.1%) in 2007 to 41% in 2015. Although 95% initiate breastfeeding yet CBF at 22-24 months is 33.1%. ISSS at 6-8 months is 66%, MMF 38.9%, MDD 28.3% and MAD 14.3% which is far below the acceptable global recommendations. These CF indices improve with education, wealth index and urban living. By law mothers are granted 16 weeks of fully paid maternity leave and fathers ten days paternity leave.

By contrasting and extrapolating between country experiences, we can see that intervention programs for improving breastfeeding are more effective when women are empowered by education and become worse or poorly effective with illiteracy and poor living standards. Hence eradication of illiteracy and poverty are mainstay for the effectiveness of interventions or programs for promotion, protection and support of breastfeeding. However with highly educated women this may result in paradoxical results unless working women are granted support to breastfeed exclusively for six months and continue for two years with adequate support by legislations and facilitations from their workplace.

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المقال السادس: أنماط الرضاعة الطبيعية فى بلدان خارج إقليم شرق المتوسط

الملخص و الاستنتاجات

تم عرض موجز عن وضع تغذية الرضع فى بعض البلدان ، خارج نطاق إقليم شرق المتوسط ، والتى تشارك بلدان إقليم شرق المتوسط فى الثقافة الاسلامية و بعض الاحيان اللغة والتاريخ و الاعتقادات والمفاهيم ومن ثم فيمكننا اكتساب بعض التجارب الناجحة التى يمكن الاستفادة منها فى إقليم شرق المتوسط . وتتضمن هذه البلدان الجزائر و موريتانيا من قارة افريقيا و بنجلاداش واندونيسيا من الشرق الأقصى (بقارة أسيا) وبالأخص أن هذه البلدان تتميز بعمل عدد كبير من المسوح الديموجرافية المتقاربة عبر العقود الماضية والتى تم اعادة تحليلها من قبل اليونيسف بمنهجية موحدة تسمح بالمقارنة والاستدلال بنتائجها .

ففى **الجزائر** فإن الرضاعة المطلقة فى الشهور الست الأولى من العمر قد ارتفعت من 6.9% فى سنة 2006 إلى 47% في سنة 2013 وبالأخص فى الأمهات المتعلمات والميسورات . وهذه قفزة مؤثرة لهذا المؤشر لم نشاهدها في أي من البلدان الأخرى وتدل على أنه يمكننا الاستدلال بالتدخلات التى أدت إلى هذه الظاهرة والاستفادة منها لتطبيقها فى البلدان المحيطة كدول تونس وليبيا من ناحية والمغرب من ناحية أخرى وهى بلدان تابعة للشرق المتوسط وتشارك نفس الطباع والثقافة واللغة. كما أظهرت النتائج أن الرضاعة الغالبة كانت أكثر انتشاراً ما بين الأمهات الأميات وهذا يدل على أن القائمين على البرنامج استغلوا ثقافة الرضاعة الطبيعية الغالبة لتحويلها إلى رضاعة طبيعية مطلقة. ولكننا نجد أن مواصلة الرضاعة لعامين كان متدنياً إذ أن واحد من كل أربع أطفال يواصلون الرضاعة لعامين بمعدل 22.7%. كما أن معدلات البداية المبكرة بالإرضاع من الثدي خلال الساعة الأولى بعد الولادة قد انخفض من 49.5% إلى 36.4% وقد يعكس ذلك التغيير الذى حدث فى توصيات المنظمات العالمية من تشجيع بدء الرضاعة من خلال عملية وضع المولود ملامس الجلد للجلد في الساعة الأولى حتى يتمكن من الإرضاع بذاته وبدون تدخل من الآخرين والذى قد يستغرق وقت طويل قد يصل إلى ساعتين أو أكثر.

أما بالنسبة إلى التغذية التكميلية فإن 77.2% يدخلن الوجبات التكميلية من 6 إلى 8 شهورمن العمر لأطفالهن و52% يلتزمن بالحد الأدنى لتواتر الوجبات . كما أن الأم العاملة تمنح 14 أسبوع مدفوعة الأجر بالكامل بعد الولادة.

أما بالنسبة **لدولة بنجلاداش** فإن هناك تحسن ملحوظ في مؤشرات التقزم و نقص الوزن خلال العقدين والنصف السابقين و قد يرجع ذلك إلى ارتفاع معدلات الرضاعة الطبيعية المطلقة من 37.2% في 1995 إلى 55.3% في 2014 وبالأخص الحفاظ على معدلات عالية فى مواصلة الرضاعة الطبيعية لعامين والتى تعتبر من أعلى المعدلات فى العالم. كما أن نصف الأطفال يبدأون الإرضاع من الثدي مبكراً فهناك 499 مستشفي ولادة من مجموع 600 مستشفى قد حصلت في وقت سابق على الاعتماد كمستشفيات صديقة للطفل وعلى الرغم من أن أعداد المستشفيات في تدني ولكنها تعتبر من التجارب الرائعة والمؤثرة التى يمكن الاستفادة منها لتطبيقها فى بلدان إقليم شرق المتوسط التى تعاني من تدني في هذا المؤشر.

أما بالنسبة للتغذية التكميلية فإن 64.7% يدخلن الوجبات من 6 إلى 8 شهور من العمر و أن مؤشر الحد الأدنى لتواتر الوجبات يبلغ 63.6 % ولكن هناك تدني فى مؤشر الحد الأدنى لتنوع الغذاء (26.6%) وبالتإلى مؤشر النظام الغذائى المقبول (22.8%) ، وهذه الظاهرة تزداد ومع الفقر والأمية. كما أن الأمهات العاملات فى بنجلاداش تمنح 16 أسبوع أجازة رعاية طفل مدفوعة الأجر بالكامل.

وقد ارتفعت في **اندونسيا** أنماط الرضاعة الطبيعية المطلقة إلى 40.9% والرضاعة الطبيعية الغالبة 48.8% وبالأخص ما بين الفقراء و الأمهات الأميات. كما أن 55.3% من الأمهات يواصلن الرضاعة الطبيعية لعامين . وهناك ارتفاع في نمط البداية المبكرة بالرضاعة الطبيعية إلى 49.3%.

أما بالنسبة للتغذية التكميلية في **اندونسيا** فإن 91.1% يدخلن الوجبات من 6 إلى 8 شهورمن العمر و أن مؤشر الحد الأدنى لتواتر الوجبات يبلغ 66.1% والحد الأدنى لتنوع الغذاء يبلغ 52.6% ، وعلى الرغم من ذلك فهناك تدني في مؤشر الحد الأدنى للنظام الغذائى المقبول يصل إلى 33.6% ، وهذه الظاهرة تزداد مع الفقر والأمية. كما أن الأمهات العاملات فى اندونيسيا تمنح 90 يوم أجازة رعاية طفل مدفوعة الأجر بالكامل (45 يوم قبل و 45 يوم بعد الولادة).

وفى **موريتانيا** فقد أظهرت المسوحات الحديثة ارتفاعاً في التقزم بنسبة 27.9% ويصاحب ذلك ارتفاع فى نسبة قلة الوزن إلى 24.9% وقد يكون زيادة نسبة الأمية في هذه البلد من الأسباب المؤثرة على ذلك. أما بالنسبة لممارسة الرضاعة الطبيعية المطلقة فقد ارتفعت من 11.1% فى 2007 إلى 41% فى 2015 ولكن ثلث الأمهات يواصلن الرضاعة الطبيعية لعامين على الرغم من أن 95% يبدأن بالرضاعة الطبيعية بعد الولادة .

أما بالنسبة للتغذية التكميلية **في موريتانيا** فإن 66% يدخلن الوجبات من عمر 6 إلى 8 شهور وأن مؤشر الحد الأدنى لتواتر الوجبات بلغ 38.9% ولكن هناك تدني في مؤشر الحد الأدنى لتنوع الغذاء (28.3%) مما يجعل مؤشر النظام الغذائى المقبول يصل إلى 14.3% ، وهذا المعدل أقل من المقبول عالمياً ، وهذه الظاهرة تزداد مع الفقر والأمية. وتمنح الأمهات العاملات **فى موريتانيا** 16 أسبوعا أجازة رعاية طفل مدفوعة الأجر بالكامل وللأباء عشرة أيام.

ونستنتج مما سبق أن أساس نجاح تدخلات تشجيع وحماية الرضاعة الطبيعية تعتمد على الإرتقاء بنسبة ومستوى التعليم والتوعية والدعم والمساندة المادية والمعنوية للمرأة وأن ذلك يؤدي إلى استجابة مؤثرة للتدخلات و برامج الصحة والتغذية التى تقدمها الدولة لتحسين مؤشرات سوء التغذية والتغلب على مشكلة التقزم الناتجة من أنماط تغذية الرضع المتدنية ، ولكن يجب أن يصاحب ذلك أيضاً دعم للمرأة العاملة المرضع وتحسين في مستوى التعليم والمعيشة ليتماشى ذلك مع التنمية المستدامة.

.

Article VII

Social Determinants that Influence Infant Feeding Practices

Azza Abul-Fadl, Ayah Sarhan, Samaah Al-Yassin, Ayoub Al-Jawaldeh

Overview

In this article we used data from the UNICEF Global database for infant feeding status to focus on the relationship between the indices of infant feeding with education, wealth index and income level of the country. The infant feeding indices included early initiation of breastfeeding (EIBF), exclusive breastfeeding (EBF), predominant breastfeeding PBF), continued breastfeeding (CBF) at 12-15 months and 20-23 months and complementary feeding (CF) indices which included minimum meal frequency (MMF) and minimum diet diversity (MDD) and minimum acceptable diet (MAD). The database included all the previous and current national surveys for countries from the different regions of the world that were reanalyzed by UNICEF. Subanalysis of infant feeding indices was done in relation to sex, residence, level of education and wealth quintiles (***UNICEF, 2018***).

A comparative analysis between different countries was made using the World Bank classification by level of income. The low income countries (LIC) include Afghanistan, Niger, Somalia, Syria and Yemen. The low middle income countries (LMIC) include Bangladesh, Egypt, Indonesia, Mauritania, Pakistan, Sudan, Tunisia and State of Palestine. Upper middle income countries (UMIC) include Algeria, Iran, Iraq, and Jordan. However Jordan has recently been upgraded to become an upper income country, but the national surveys were done when it was in the UMIC category.

Countries studied included those whose global data where reanalyzed in relation to level of education and wealth quintiles. By region, the countries that were included from North Africa included Egypt, Tunisia, Algeria and Morocco. Countries from Central and West Africa included Sudan, Mauritania, Niger and Somalia. Countries included from West side of the Eastern Mediterranean included State of Palestine, Jordan, Syria, Iraq and Yemen. Countries included from Central and East Asia included Afghanistan, Pakistan, Bangladesh and Indonesia.

According to the World Health Organization (WHO), countries that are included in the Eastern Mediterranean region (EMR) include Afghanistan, Egypt, Jordan, Iraq, Pakistan, Palestine, Somalia, Syria, Sudan, Morocco, Tunisia and Yemen. The remaining countries in Africa belong to the Afro region and in Asia belong to the South East Asia region (SEAR).

The data is presented in percent frequency distribution and compiled into excel sheets. The mean and standard deviation (SD) was estimated for the country groups. The data is presented in tables and figures.

VII.1 Maternal Education and Infant Feeding

Introduction

Maternal education has been shown to be strongly associated with young child nutritional outcomes. The level of maternal education was also found to be associated with the degree and severity of malnutrition as higher levels of maternal education reduced the odds of child stunting, underweight and wasting. (***Makoka and Kinya, 2015)***. In addition, improving maternal education can also increase child survival (***Cleland and Van Ginneken, 1988***) and child health (***Desai and Alva, 1998***).

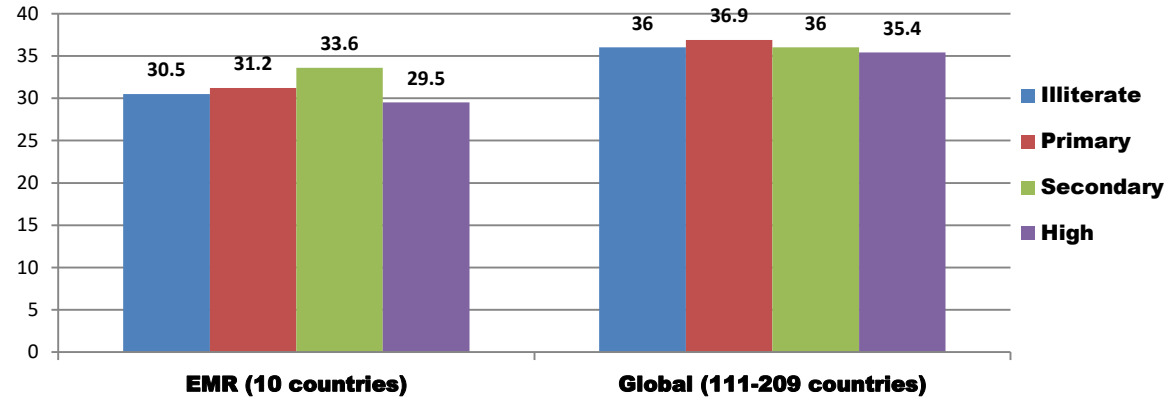
However the extent to which maternal education influences early infant feeding practices is controversial. It is argued that higher education may be associated with higher levels of income, urban dwellings and paid support in childcare and this may encourage mothers to breastfeed. Also that the highly educated mothers tend to get married to highly educated men and thereby have better access to health and medical care. While on the other hand, higher levels of education may be associated with poor feeding practices as mothers tend to be working mothers or have access to delivery in private hospitals that do not provide support to mothers in breastfeeding and give early formula feeds to the baby that lead to breastfeeding difficulties and early discontinuation of breastfeeding. Also, these same mothers can afford to leave their children to child care takers who are not educated and expose them to suboptimal feeding practices. Based on such contradictory arguments, it is not clear how much maternal education influences infant feeding practices.

Hence the aim of this review is to highlight the relationships between the level of education and the various patterns of breastfeeding and complementary feeding practices in the countries of the Eastern Mediterranean region (EMR) and the neighboring countries that were included in this study.

Trends and Status of Infant & Young Child Feeding by education

1. Exclusive Breastfeeding

Figure VII.1. Patterns of Breastfeeding in the 10 EMR countries versus global estimates by level of education



We compared EBF rates by level of education of 10 EMR countries vs. global estimates (111 to 209 countries). Our findings showed that the mean EBF in the EMR countries tended to be lower among illiterate mothers, mothers with primary education and highly educated mothers than their counterparts of the global rates. This may indicate that factors other than education maybe responsible for such differences in the EMR. One half of the EMR countries are facing chronic conflict with superimposed natural disasters. Furthermore, the health care system in these countries is influenced by the state of political instability which makes them vulnerable to the marketing practices of infant milk formula companies, since there is no strong regulatory system to control them. Moreover the weakened economy by the conflicts and chronic emergencies makes them vulnerable to seek support from these companies. These small businesses, as private clinics of doctors, private medical practices and pharmacies, respond and believe the claims and false pretenses these companies about their products being a substitute to mother's milk when mothers have difficulties with breastfeeding. They influence politicians, decision makers as well as media personnel with their false claims about their products. They thereby gain political support to disseminate these products as part of the emergency subsidy food supplies needed for the

vulnerable populations, increasing the toll of morbidity, rather than saving lives.

Marketing practices of infant milk formula companies and non-Baby-friendly health facility practices not only reduce EBF but also CBF rates and increase short term deaths from communicable diseases and long term morbidity from non-communicable diseases (NCD). They reduce the potential breastfeeding can have on increasing cognitive, intellectual and psychological wellbeing and thereby influence the country's economy on the long-term. Artificial feeding is like replacing an arm or leg by an artificial arm or leg. This is because difficulties in breastfeeding can be remedied like any ailment and when breastfeeding is not possible it should be replaced by milk from another mother similar to replacement of organ failure by transplantation. Hence, breastfeeding is not food that can be replaced by another type of food or milk from another animal, it is a living tissue that is needed by the growing child to achieve their potential for optimum growth and development in order to become a complete human being.

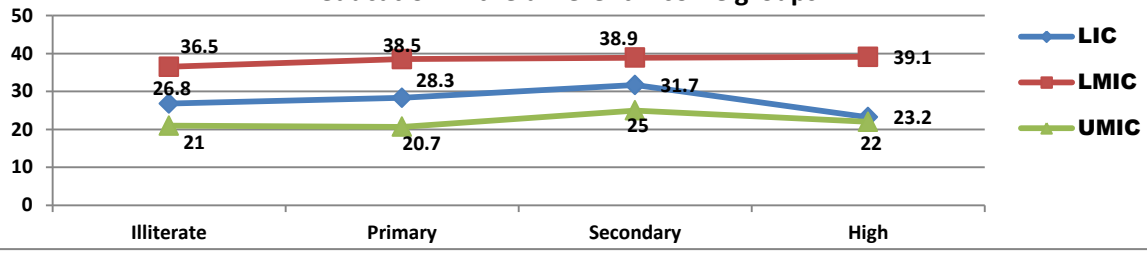
Table VII.1. Exclusive breastfeeding rates in the developing countries of the Eastern Mediterranean, West and North Africa, East and Central Asia by level of education

Countries	WB Classif	Year	Source	Illiterate	Sample size	Primary	Sample size	Secondary	Sample size	High	Sample size
Afghanistan	LIC	2015	DHS	44.0	2,473.3	43.4	275.0	38.6	266.9	23.9	56.2
Algeria	UMIC	2012	MICS	23.2	295.3	26.5	823.1	23.9	372.6	26.5	223.7
Bangladesh	LMIC	2014	DHS	56.2	815	53.7	197.2	55.4	283.2	57.9	88.8
Egypt	LMIC	2014	DHS	42.7	250.8	34.0	120.3	39.5	844.9	39.2	244.0
Indonesia	LMIC	2012	DHS	25.1	37.1	41.6	436.0	40.7	914.0	43.6	205.9
Iraq	UMIC	2011	MICS	22.7	655.1	20.5	1838.7	-	-	-	-
Jordan	UMIC/ HIC	2012	DHS	-	8.2	15.0	42.5	26.3	475.5	17.4	304.5
Mauritania	LMIC	2015	MICS	48.4	250.6	38.5	322.3	-	-	-	-
Niger	LIC	2012	DHS	22.5	1285.9	28.7	135.2	28.8	52.9	-	-
Pakistan	LMIC	2013	DHS	39.7	595.8	38.4	221.2	33.5	234.7	34.3	99.6
Somalia	LIC	2006	MICS	9.3	429.0	11.9	79.0	-	17.6	-	-
State of Palestine	LMIC	2010	MICS	13.4	39.9	27.9	417.0	-	-	-	-
State of Palestine	LMIC	2014	MICS	-	5.3	42.6	156.5	38.1	234.8	35.2	271.6
Sudan	LMIC	2014	MICS	51.1	648.2	56.1	581.3	61.3	193.1	55.7	91.9
Syria	LIC	2006	MICS	31.4	187.9	29.1	478.0	27.7	408.0	22.5	89.0
Tunisia	LMIC	2011	MICS	15.5	32.6	14.0	72.7	3.9	126.0	7.8	64.3
Mean±SD				31.8 ±14.6		29.1±14.0		34.8±14.3		33.1±14.8	

Approximately less than one third of the populations of the countries under study were EBF with a slight tendency to be higher in those with secondary and higher education than in those with primary or no education as shown in table (VII.1.). However this tendency disappeared when analyzed in relation to country income level, as LIC and UMIC (extremes of wealth) showed a significant decrease in EBF among mothers with higher education compared to those with illiterate, primary or secondary education. However the LMIC countries showed no differences among the different groups of mothers with different levels of education as shown in figure VII.2. EBF was highest in the LMIC and lowest in UMIC. The explanation for these findings is probably related to community awareness and the effect of national campaigns for breastfeeding promotion in these countries and

the effect of the Baby-Friendly Hospital Initiative (BFHI) in promoting EBF through hospitals from birth. The decline in EBF in the UMIC probably reflects the higher percentage of highly educated mothers in these countries. Hence a more mothers in these countries are working mothers, and are thereby inclined to introduce supplements when they go back to work. In addition, these mothers tend to deliver in private hospitals, which rarely abide by the BFHI practices; this places them at risk of early discontinuation of breastfeeding.

Figure VII.2. Exclusive Breastfeeding patterns in countries by level of education in the different income groups



LIC: Lower income countries include Afghanistan, Somalia, Syria and Niger.
LMIC: Lower middle income countries include Bangladesh, Egypt, Indonesia, Mauritania, Pakistan, Palestine, Sudan and Tunisia.
UMIC: Upper Middle income countries include Algeria, Jordan and Iraq.

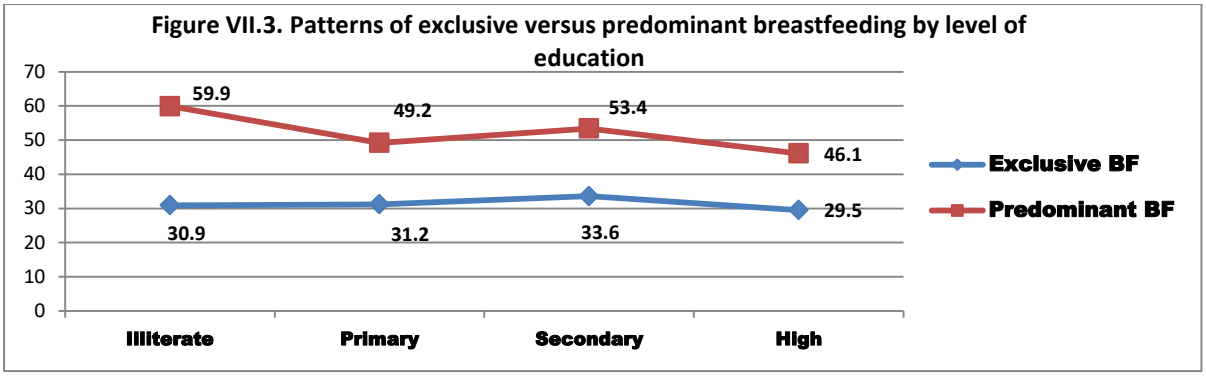
EBF was lowest in the UMIC, with little difference between educational levels, being highest in women with secondary education. These mothers are probably not working mothers, but in the same time their higher level of education permits them to be more empowered as decision makers, unlike those mothers with lower levels of education who are under the influence of their mothers or mother-in-law.

EBF was highest in LIC and again with no marked differences between educational levels but the highest values were among the more educated mothers compared to the illiterate mothers as shown in figure (VII.2). The LMIC showed a marked decrease in EBF among the highly educated mothers. These countries are struggling with their economy and women in such an economy are mostly working mothers whose short maternity leave, whether in the public sector (12 to 16 weeks) or the private sector (6 weeks), force them to introduce other foods or drinks before six months. This explains the lower EBF rates in these countries. Moreover, the overall trends in the countries under study and globally showed that the lowest scores of EBF was among the highly educated mothers.

Exclusive Breastfeeding (EBF) versus Predominant Breastfeeding (PBF):

PBF usually runs in parallel with EBF, but is more commonly practiced than EBF. Many mothers are inclined to give supplements to their babies, driven by fears or worries that their milk is scanty or not meeting the demands of the baby. Disempowered mothers are under pressure from their surrounding social network especially when the baby cries or gives the mother and family sleepless nights. Many parents think that babies need extra water in hot climates or that the baby needs drinks or remedies to relieve their colic. Working mothers, who are unaware of how to express breastmilk and leave it with a caretaker to feed the baby during their absence, make them use supplements other than their own milk.

Unfortunately, many doctors prescribe formula to mothers who present with breast or nipple conditions or baby is sick or has a congenital anomaly or is admitted to the special baby care unit or if mothers are sick. Most of these conditions are remediable by professionals trained in lactation or breastfeeding management and usually can continue breastfeeding once the condition is treated and breastfeeding is managed. Such conditions make PBF a common practice and place CBF at risk.



PBF was highest among illiterate mothers and decreased with increasing level of education. This was more commonly seen in countries with low income as Afghanistan and Somalia where PBF may be attributed to traditional practices or misbeliefs rather than medical conditions or working mothers. While in countries with higher economies differences in PBF by level of education were much smaller indicating that other factors may be involved.

Table VII.2 Predominant breastfeeding rates by level of education in Eastern Mediterranean countries (2006 – 2015)

Country	Survey	Illiterate	Primary	Secondary	High
Afghanistan	DHS, 2015	55.3	52.0	50.6	34.2
Egypt	DHS, 2014	70.8	61.5	67.2	68.2
Iraq	MICS, 2011	51.3	48.1	-	-
Jordan	DHS, 2012	-	26.6	40.4	30.7
Pakistan	DHS, 2013	61.7	52.7	45.8	43.6
Somalia	MICS, 2006	25.9	18.8	-	-
State of Palestine	MICS, 2014	-	56.2	49.4	45.5
Sudan	MICS, 2014	79.6	80.3	87.2	66.3
Syrian Arab Republic	MICS, 2006	61.7	62.1	55.6	50.6
Tunisia	MICS, 2011	49.3	35.9	31.1	29.6
Mean ±SD		56.9±15.0	49.4±17.2	53.4±16.2	46.1±14.0

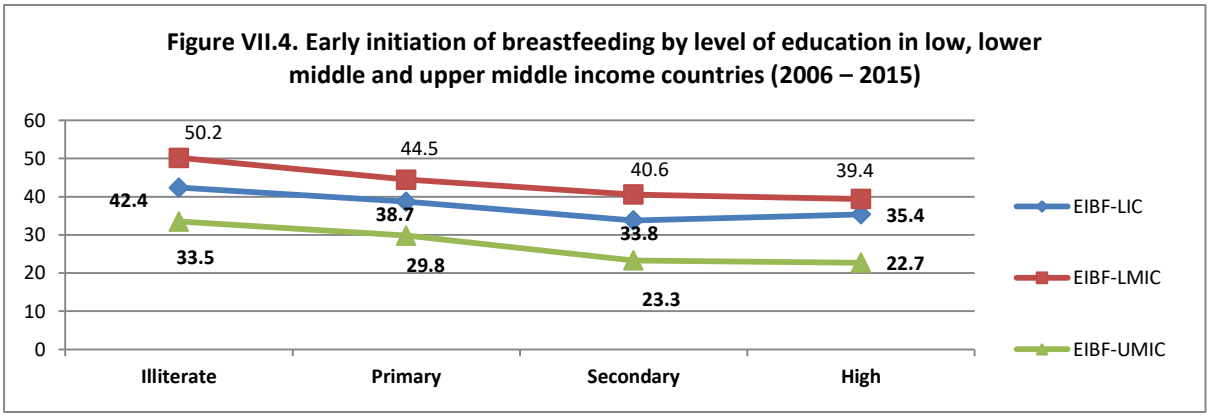
Global database UNICEF, 2018

2- Early Initiation of breastfeeding (EIBF)

EIBF is defined as the percentage of newborns put to the breast within one hour of birth. It is closely linked with the type and place of delivery and practices of birth attendants and whether they were trained in the BFHI or in childbirth mother friendly practices that encourage natural child birth, no mother infant separation and early initiation through skin-to-skin contact for one hour or up to the first suckle at the breast. Table VII.3 shows that EIBF was highest in Sudan, Mauritania and Sudan where home deliveries are more common. It was lowest in Iraq and Pakistan. There were marked differences by level of education in countries like Egypt, Jordan, Syria and Tunisia as shown in the table VII.3.

Table VII.3. Early initiation of breastfeeding by level of education in the countries under study (2006 – 2015)

Country	Survey	Illiterate	Primary	Secondary	High
Afghanistan	DHS, 2015	40.2	45.2	42.7	42.9
Djibouti	PAPFAM, 2012	53.7	49.8	-	-
Egypt	DHS, 2014	30.7	29.3	27.1	22.8
Indonesia	DHS, 2012	65.3	54.0	47.1	45.8
Iraq	MICS, 2000	16.9	16.2	15.7	-
Iraq	MICS, 2006	34.5	30.5	-	-
Iraq	MICS, 2011	48.0	42.4		
Jordan	DHS, 2012	24.9	25.0	19.4	15.6
Mauritania	MICS, 2015	66.7	59.3	-	-
Pakistan	DHS, 2013	18.8	12.3	18.3	23.8
State of Palestine	MICS, 2014	-	40.1	39.4	42.6
Sudan	MICS, 2014	68.0	67.5	73.1	68.8
Syria	MICS, 2006	35.5	32.9	31.6	29.0
Tunisia	MICS, 2011	48.3	43.4	38.9	32.9
Mean±SD		**42.4±16.9**	**38.7±15.7**	**33.8±18.5**	**35.4±17.04**



LIC: Lower income countries include Afghanistan, Niger, Syria and Yemen. LMIC: Lower middle income countries include Djibouti, Egypt, Indonesia, Mauritania, Pakistan, Palestine, Sudan and Tunisia. UMIC: Upper Middle income countries include Algeria, Iraq and Jordan.

Analysis by income group showed that EIBF was lowest in the UMIC and particularly among mothers with higher levels of education as it was 22.7% in the highly educated vs. 33.5% in the illiterate mothers. EIBF was highest in the illiterate mothers of the LIC but decreased progressively with increasing level of education from 50.2% in the illiterate to 39.4% in the highly educated. The latter was still higher than the illiterate mothers of the UMIC and mothers with higher education of LMIC. Figure (VII.4) shows that EIBF decreased with increasing country income level and increasing level of maternal education. Since EIBF is a practice that depends on the mode and place of delivery, it appears that with higher income level and higher education there is probably a higher tendency for these mothers to be exposed to medicalized births in non-Baby-friendly hospitals. These births are probably influenced by the marketing practices of infant milk formula companies or health staff that are not trained in the state of art early infant feeding and birth practices that encourage breastfeeding.

3- Breastfeeding continuity

WHO and UNICEF recommend that breastfeeding should be continued for at least two years or more. This is supported by evidence based benefits for both the mother and the child. Despite the evidence supporting reduced breast and ovarian cancer for the mother, and increased intellectual, cognitive and psychological benefits for the child, this practice is increasingly decreasing around the world. CBF in the second year decreases by one third or less as shown in tables VII.4 and VII.5 respectively. Hence there are two peaks of steep decline in CBF, the first at 3-6 months and the second from 15 to 18 months. The first decline is more related to infant causes, but the second decline is related to maternal causes, mainly due to lack of social support that encourage her to continue to breastfeed.

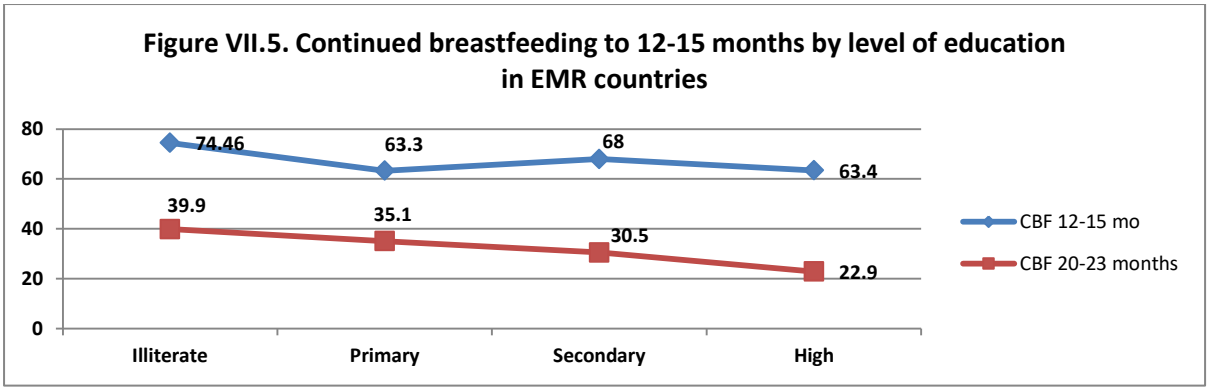
Table VII.4. Breastfeeding continuity to 12-15 months by level of education in countries of the Eastern Mediterranean region

Country	Survey	Illiterate	Primary	Secondary	High
Afghanistan	DHS 2015	77.1	85.2	81.8	83.7
Egypt	DHS 2012	80.8	75.6	80.9	78.0
Iraq	DHS 2012	62.8	51.3		
Jordan	MICS 2000		44.8	49.6	31.8
Pakistan	MICS 2012	85.7	78.7	76.7	64.5
State of Palestine	MICS 2014		53.2	54.9	51.2
Somalia	MICS 2006	53.2	41.9		
Sudan	MICS 2014	85.2	90.6	95.2	95.0
Syria	MICS 2006	76.4	65.0	55.9	63.4
Tunisia	MICS 2011		47.1	49.1	39.7
Mean±SD		**74.46±11.21**	**63.34±17.1**	**68.01±16.5**	**63.4±20.4**

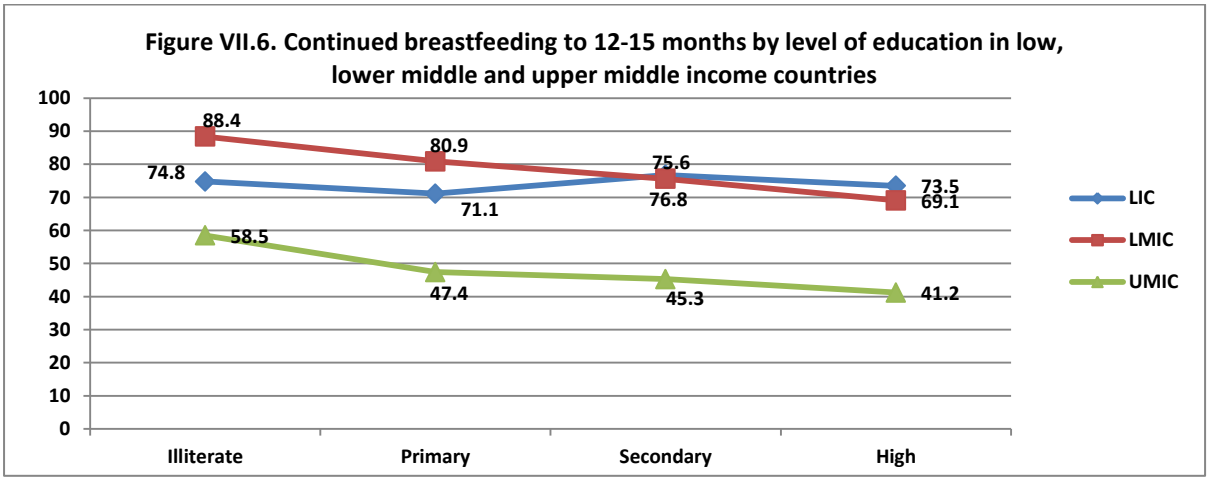
Table VII 5. Breastfeeding continuity to 20-23 months by level of education in countries of the Eastern Mediterranean region

Country	Survey	Illiterate	Primary	Secondary	High
Afghanistan	DHS, 2015	58.5	64.7	59.9	-
Egypt	DHS, 2014	34.1	27.4	19.2	10.1
Iraq	MICS, 2011	27.1	23.1	-	-
Jordan	DHS, 2012	16.2	26.3	9.1	16.5
Pakistan	DHS, 2013	58.5	68.4	43.6	50.3
Somalia	MICS, 2006	38.5	30.9	-	-
State of Palestine	MICS, 2014	-	-	9.4	10.6
Sudan	MICS, 2014	55.2	42.5	54.2	41.0
Tunisia	MICS, 2011	31.1	17.3	24.8	8.9
Mean±SD		**39.9±14.8**	**35.13±18.4**	**30. 5±18.5**	**22.9±16.5**

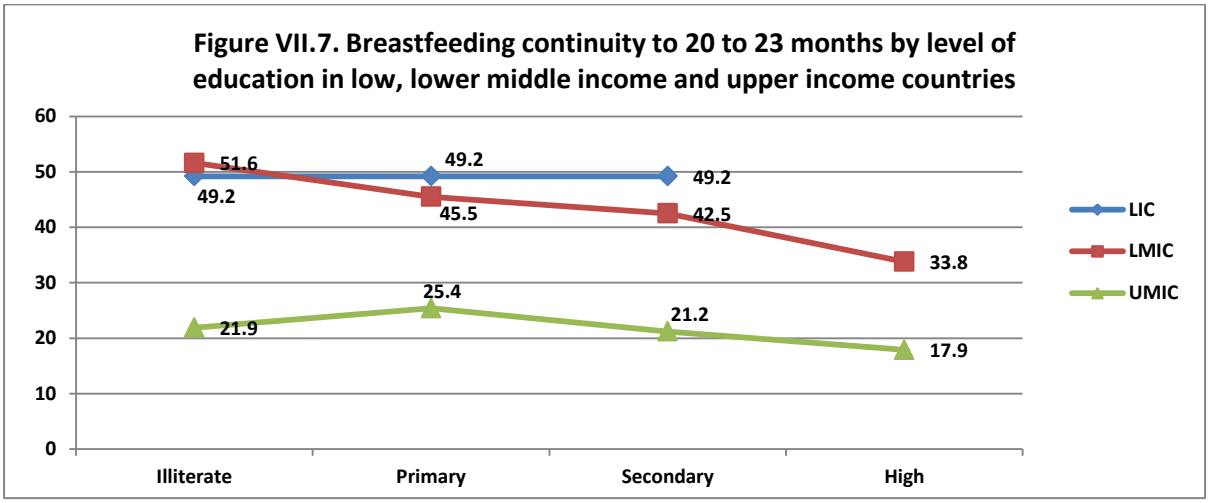
CBF for one year (12-15 months) was highest in the illiterate mothers (74.5±11.2) and decreased progressively by increasing level of education to 63.4±20.4 in the highly educated. However the standard deviation increased with increased level of education indicating that there was considerable variation in the continuity pattern in mothers with increasing level of education and that some mothers prefer to continue while others are driven by other factors to discontinue breastfeeding. The latter mothers are those who are either working or can afford to either buy readymade marketed foods or take their child to private clinics that are influenced by the marketing of infant milk formula. This is more evident in CBF at 20-23 months that decreased by one half with increasing level of education from almost 40% in the illiterate to 22% in the highly educated mothers.



LIC: Lower income countries include Afghanistan, Niger, Syria and Yemen.
LMIC: Lower middle income countries include Djibouti, Egypt, Indonesia, Mauritania, Pakistan, Palestine, Sudan and Tunisia.
UMIC: Upper Middle income countries include Algeria, Iraq and Jordan.



LIC: Lower income countries include Afghanistan, Niger, Syria and Yemen.
LMIC: Lower middle income countries include Bangladesh, Egypt, Indonesia, Mauritania, Pakistan, Palestine, Sudan and Tunisia.
UMIC: Upper Middle income countries include Algeria, Iraq and Jordan.



LIC: Lower income countries include Afghanistan, Niger, and Somalia.
LMIC: Lower middle income countries include Bangladesh, Egypt, Indonesia, Pakistan, Palestine, Sudan and Tunisia.
UMIC: Upper Middle income countries include Algeria, Iraq and Jordan.

The level of economic status of the country also influenced continuity rates of breastfeeding. Countries of the UMIC group tended to have considerably shorter CBF rates at one and two years compared to mothers of LIC and LMIC countries as shown in figures VII.6 and VII.7. In the LIC there was no difference in the continuity rates in mothers with different levels of

education in the second year. However in the LMIC there was increasing tendency for CBF to decrease with increasing level of education. The latter may reflect the tendency for mothers in LIC to have access to more social network support than mothers of LMIC who tend to live in nuclear families and do not have access to encouragement to continue breastfeeding to two years.

4- Complementary Feeding

Complementary feeding (CF) is assessed by three main indicators, timely introduction of foods at 6-8 months (ISSS), mimium meal frequency (MMF) and minimum diet diversity (MDD), among many other indicators for assessing iron consumption and other micronutrient intakes. Other additional indicators include correct amount of food, meal consistency, hygiene practices, responsive feeding and correct feeding during illness. All of these different variables under complementary feeding are important to indicate adequate or inadequate practice respectively. In the coming section we examine the relationship between these indicators and maternal level of education in the countries under study by level of income.

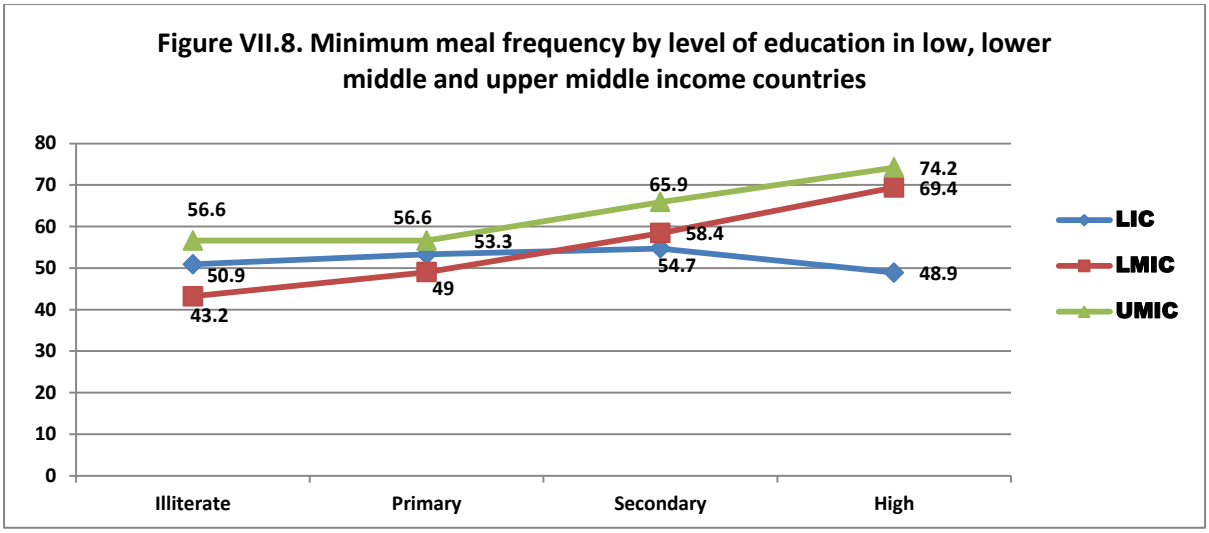
Minimal Meal Frequency (MMF)

MMF is an indicator used to assess the adequacy of the practice of complementary feeding. It is defined as the percentage of children 6-23 months of age who were fed solid, semi-solid or soft foods the minimum number of times or more during the previous day AND the number of non-breastfed children 6–23 months of age who received solid, semi-solid or soft foods or milk feeds the minimum number of times or more during the previous day to all children (breastfed and non-breastfed) aged 6-23 months at the time of the survey.

MMF is defined as: 2 times solid, semi-solid or soft foods for breastfed infants 6–8 months of age; 3 times solid, semi-solid or soft foods for breastfed children 9–23 months of age; and 4 times solid, semi-solid or soft foods and/or milk feeds for non-breastfed children 6–23 months of age.

Table VII.6. Minimum meal frequency (MMF) by level of education in countries of the Eastern Mediterranean region

Country	Survey MMF	Illiterate	Primary	Secondary	High
Afghanistan	DHS 2015	51.4	50.5	51.1	48.9
Egypt	DHS 2014	54.3	52.2	60.7	67.8
Iraq	MICS 2011	47.0	54.8		
Jordan	DHS 2012	75.5	63.5	79.5	86.9
Pakistan	DHS 2013	58.7	61.9	68.2	75.8
State of Palestine	MICS 2010	54.7	56.0		
State of Palestine	MICS 2014		73.4	78.1	83.4
Sudan	MICS 2010	29.8	32.9	26.6	
Sudan	MICS 2014	37.2	42.1	47.5	53.5
Tunisia	MICS 2011	34.3	42.3	51.2	57.9
Yemen	DHS 2013	46.7	50.6		
Mean± SD		37±6.2	41.9±6.3	41.8±10.8	55.7±2.2



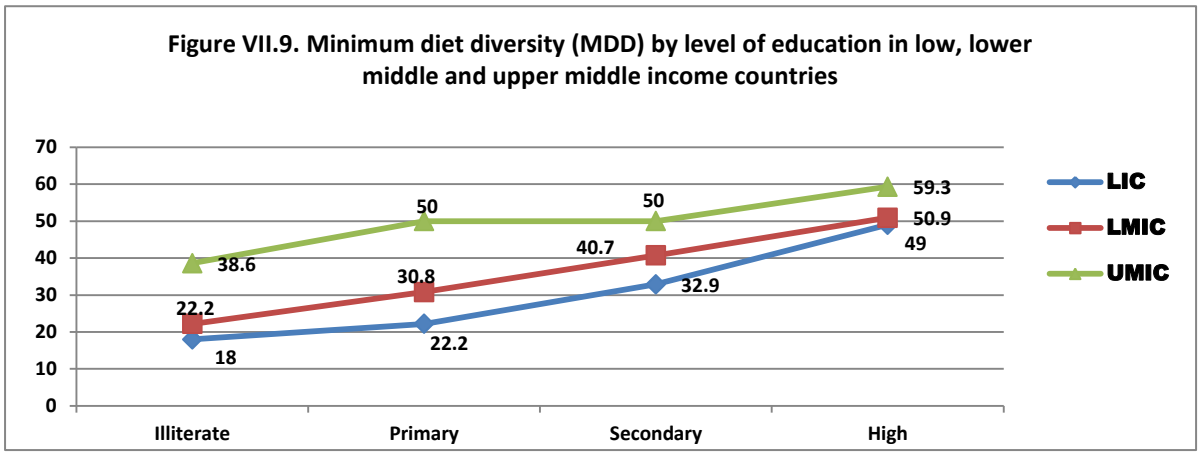
LIC: Lower income countries include Afghanistan, Niger and Yemen.
LMIC: Lower middle income countries include Egypt, Indonesia, Mauritania, Pakistan, Palestine, Sudan and Tunisia.
UMIC: Upper Middle income countries include Algeria, Iraq and Jordan.

Minimum Dietary Diversity (MDD)

MDD is an important indicator used to assess the adequacy of the quality of complementary feeding practices. It is defined as the percentage of children 6-23 months of age who received a minimum diet diversity of at least >5 food groups (out of 8) in the previous day of the survey to all children (breastfed and non-breastfed) aged 6-23 months at the time of the survey. The eight food groups are: (i) breastmilk; (ii) grains, roots and tubers; (iii) legumes and nuts; (iv) dairy products (infant formula, milk, yogurt, cheese); (v) flesh foods (meat, fish, poultry and liver/organ meats); (vi) eggs; (vii) vitamin-A rich fruits and vegetables; (viii) other fruits and vegetables.

Table VII.7. Minimum Diet Diversity (MDD) by level of education in countries of the Eastern Mediterranean region

Country/ MDD	Survey	National MDD	Illiterate	Primary	Secondary	High
Afghanistan	DHS, 2015	22.1	20.5	21.9	30.3	46.1
Egypt	DHS 2005	56.2	54.0	48.9	58.0	61.9
Egypt	DHS 2008	47.1	38.4	47.6	48.2	56.6
Egypt	DHS, 2014	34.7	33.6	26.1	34.8	39.4
Jordan	DHS, 2007	67.2	56.3	62.5	64.3	74.6
Jordan	DHS, 2012	38.8	21.0	37.5	36.7	43.9
Pakistan	DHS 2013	17.8	13.4	17.4	22.7	34.3
State of Palestine	MICS, 2014	50.3		39.8	47.0	60.9
Sudan	MICS, 2014	24.0	15.3	19.8	41.1	46.2
Yemen	DHS, 2013	21.3	26.7	33.1	41.4	51.9
	37.95±16.0	31.02±14.9	35.46±13.9	42.45±11.8	51.58±11.5	37.95±16.0



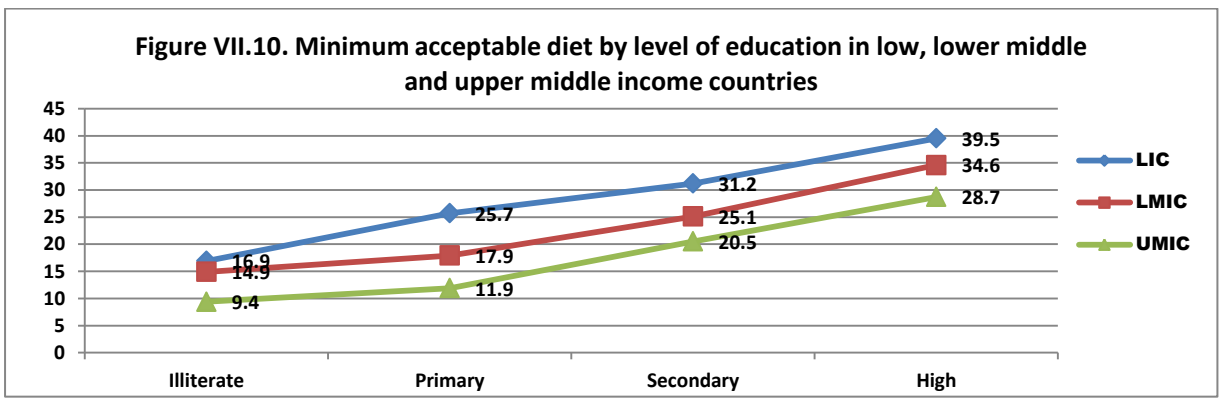
LIC: Lower income countries include Afghanistan, Niger and Yemen. LMIC: Lower middle income countries include Bangladesh, Egypt, Indonesia, Mauritania, Pakistan, Palestine, Sudan. UMIC: Upper Middle income countries include Jordan.

Minimum Acceptable Diet (MAD)

MAD is defined as the percentage of children 6-23 months of age who received a minimum acceptable diet i.e. who had at least the MDD and the MMF during the previous day AND Non-breastfed children 6-23 months of age who received at least two milk feedings and had at least the MDD not including milk feeds and the MMF during the previous day to all breastfed and non-breastfed children aged 6-23 months at the time of the survey. Figures VII.8, 9 and 10 demonstrate the trends in MMF, MDD and MAD by income group. MMF was lowest in the LMIC in the illiterate and mothers with primary education, but the LIC were lowest in the secondary and higher education groups. MDD was lowest in the LIC. MAC was highest in the UMIC. Tables VII.6, 7 and 8 present the MMF, MDD and MAD for each country by level of education.

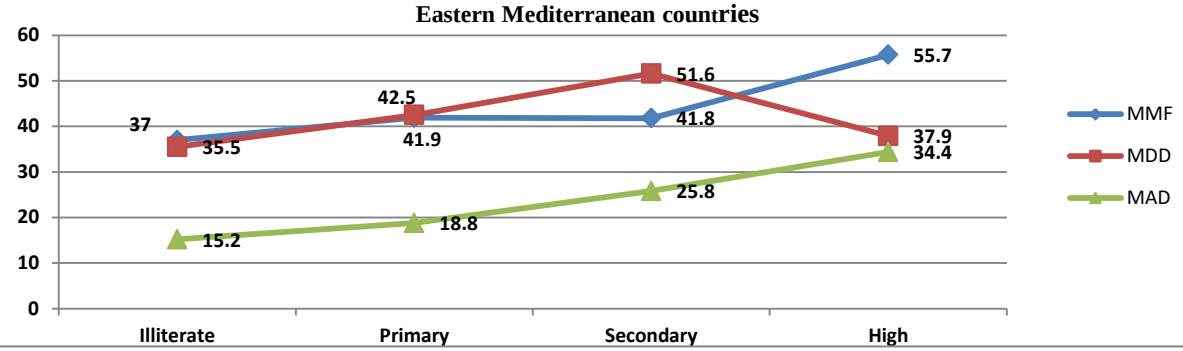
Table VII.8. Percent minimum acceptable Diet (MAD) by level of education in the Eastern Mediterranean countries

Country	Illiterate	Primary	Secondary	High
Afghanistan	14.3	15.5	22.9	28.7
Egypt	23.5	16.7	22.6	28.7
Jordan	16.9	25.7	31.2	39.5
Pakistan	10.7	14.4	19.2	29.8
State of Palestine	-	29.3	35.0	49.7
Sudan	10.5	11.4	23.6	30.1
MAD in mean±SD	15.2±4.8	18.8±6.4	25.8±5.5	34.4±7.8



LIC: Lower income countries include Afghanistan and Niger. LMIC: Lower middle income countries include Egypt, Indonesia, Pakistan, Palestine and, Sudan. UMIC: Upper Middle income countries include Jordan.

Figure VII.11. Patterns and trends of complementary feeding by level of education in the Eastern Mediterranean countries



MMF: Minimum meal frequency, MDD: Minimal dietary diversity, MAD: Minimum acceptable diet

CONCLUSIONS

EBF and CBF for two years continue to represent challenges and threats for achieving global targets for adequate early infant feeding practices in countries of the upper middle and high income particularly in the highly educated mothers. On the other hand many of the developing countries have not reached targets for empowering women to continue their education to higher levels. The study revealed that sampled mothers were predominantly women with primary education. Mothers with high education were much less in the sample studied, indicating that many women fail to reach higher levels of education.

Also many of those mothers from lower levels of education come from low income groups. Hence the educational gap between the income groups is one of the reasons impeding development. However we have to bear in mind that encouraging women to achieve higher levels of education should be accompanied by increasing maternity support to the working highly educated mothers. This is done by enacting laws for protecting maternity rights to exclusively breastfeed for six months and having Breastfeeding friendly workplaces that encourage women to continue breastfeeding for two years. This necessitates the conduction of studies that illustrate the profits gained on short and long term at company and national level from providing extended maternity support to breastfeeding working mothers. For instance the return on investment from retaining experienced women versus the cost of absenteeism and sick leaves for their children who were not breastfed (at short term) and the cost of medical insurance and absenteeism from chronic diseases as diabetes and cancer in the women or their children on the long term. Also the cost of hiring men who were not breastfed and who are inclined to develop diseases linked with early formula feeding as diabetes and obesity and its consequences on the cardiovascular system vs. the cost of hiring men who were breastfed and thereby have higher cognitive development and can generate profit to the company and increase its assets.

However in this review we found that women with higher levels of education (secondary and high) had better CF practices than illiterate mothers or mothers with primary education. This is possibly related to their having a higher income that permits them to buy more expensive foods especially meats and other costly food items. However this paradoxical finding indicates that education is linked with improved CF practices but does not have the same effect on breastfeeding practices especially EBF and CBF for one and two years, except in response to intensive awareness campaigns.

VII.2 Wealth Status and Infant Feeding

Introduction

The effect of socioeconomic status on early infant feeding practices has not been extensively studied. Socioeconomic status should not influence breastfeeding as breast-milk is freely available to children and mothers do not need special foods to make enough milk for their children. However the effect of socioeconomic status inside a country and by economic status of country needs to be studied. UNICEF has recently reanalyzed national surveys and developed a global database that includes the wealth quintiles by country in relation to early infant feeding practices and complementary feeding indicators (***UNICEF, 2018***). This is a very good opportunity that allows further investigation of this issue that could allow a better understanding of infant and young child feeding practices.

Gewa and Leslie, (2015) showed that geographically, Kenya displayed clear division of children's diet diversity scores across its regions, unlike Uganda and Tanzania in relation to breastfeeding, minimum daily recommended levels and consumption of diets with adequate diversity. Children's age, breastfeeding status, mother's education level and working status, household wealth index, prenatal care visits, receiving vitamin A supplements, using modern contraceptives and meal frequencies were significantly associated with adequate complementary food diversity in at least one of the three countries included in the current analyses. They concluded that the reanalysis of global data was very useful for a better understanding of the current infant and young child feeding of countries (***Gewa and Leslie, 2015***).

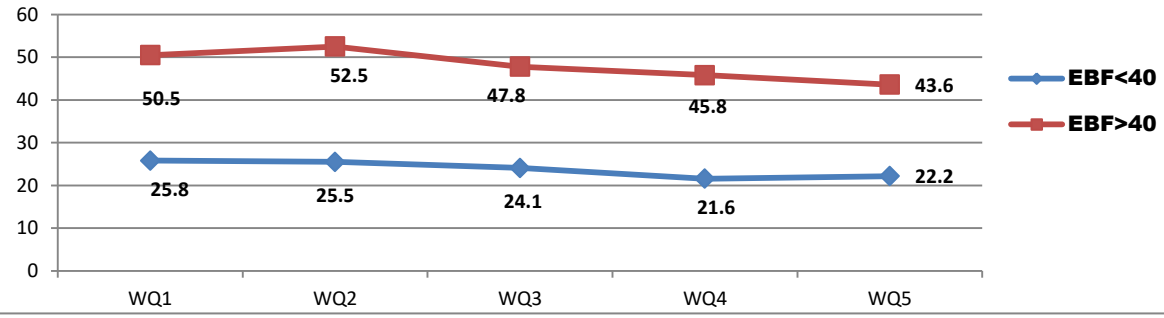
Studies about the relationship between wealth and infant feeding practices are scarce. A study in London showed that infant mortality was initially higher in wealthier families. This is because wealthier families gave their babies to rural wet nurses. These mothers had shorter birth intervals and their babies died early. Mortality declined in all groups over the period 1752–1812. They concluded that increases in maternal breastfeeding were probably important in improving survival of infants from wealthier families. However, changes in breastfeeding patterns were insufficient to account for the ubiquitous improvements in mortality of urban-born infants in this period (***Davenport, 2019***).

In this review we intend to present the patterns and trends in breastfeeding in relation to wealth status of different regions taking into consideration income status and geographic entities. Also we intend to present differences in infant feeding patterns from the geographic and income status point of view in order to identify differences that could be attributed to factors other than regional differences i.e. related to geographical, climatic, emergencies, conflict in addition to income status. Hence the aim of this review article is to gain a better understanding of how wealth and national income influence to infant feeding practices and thereby influence malnutrition, morbidity and mortality.

Trends and Status of Infant & Young Child Feeding by wealth

1. Exclusive Breastfeeding

Figure VII.12. Patterns of high (>40%) vs low (<40%) exclusive Breastfeeding by wealth quintiles



EBF<40 included Algeria, Egypt, Iraq, Jordan, Pakistan, Somalia, State of Palestine, Syria, Tunisia and Yemen.
EBF>40 included Afghanistan, Bangladesh, Mauritania and Sudan.

EBF appeared not to be significantly influenced by wealth quintiles. Still countries in the lower quintiles of wealth tended to have higher EBF scores but the differences between the upper and lower quintiles was small and tended to waiver between the different levels of wealth quintile. Most of the countries with upper scores of EBF (>40%) were in the low and low middle income, while those with lower scores (<40%) were mostly among the middle income countries. Syria, Yemen and Somalia were among the LIC with lowest scores in EBF. This shows that the decrease in EBF is a common problem in all countries irrespective of their economic development. However, EBF decreased with increasing wealth quintiles in countries with EBF >40% and those <40% as shown in figure VII.12 but slightly more among those with EBF>40%. Hence EBF tends to fall with increasing wealth status. But this is influenced by other factors as the presence of conflict, natural disasters, influencing access to foods and shelter can influence the status of infant feeding.

Exclusive Breastfeeding (EBF) vs. Predominant Breastfeeding (PBF):

Predominant breastfeeding (PBF) is defined as the percentage of children who received breastmilk as their predominant source of nourishment during the previous day. Predominantly breastfed infants may have been fed water-based liquids (e.g. plain water, juice and juice drinks, sugar water, etc.) in addition to breastmilk but not milk based-liquids or food. Many women in developing countries tend to give other fluids or drinks, especially traditional herbal decoctions, known to decrease colic and make the baby sleep. This is a traditional practice and has been driven by the normal developmental pattern of increased crying in the first three months of life. Crying is the language of children in the first 3-4 months of life and is replaced thereafter by wooing followed by giggling and later babbling sounds at 6 months. Mothers need to be made aware that crying is the norm for children at this age and that feeding cues are the signs of hunger at this age. Increasing awareness among women irrespective of their wealth index from a family oriented perspective and involving all family members can change cultural beliefs and improve feeding practices of mothers.

Table VII.9. Exclusive breastfeeding rates by wealth quintiles of countries under study

Country EBF	Survey	*WQ1	WQ2	WQ3	WQ4	*WQ5
Afghanistan	DHS 2015	41.1	40.3	45.6	48.1	40.2
Algeria	MICS 2012	25.7	22.1	28.7	21.4	30.3
Bangladesh	DHS 2014	46.1	68.8	52.5	57.8	53.4
Egypt	DHS 2014	39.4	44.6	37.1	41.4	35.1
Iraq	MICS 2011	22.6	23.3	16.5	16.8	16.4
Jordan	DHS 2012	19.6	25.7	23.7	23.4	20.5
Mauritania	MICS 2015	57.5	46.1	41.6	24.1	25.6
Pakistan	DHS 2013	34.7	40.1	44.0	32.8	37.7
Somalia	MICS 2006	17.7	14.2	8.8	1.6	3.7
State of Palestine	MICS 2014	37.2	37.2	40.6	35.6	41.8
Sudan	MICS 2014	57.3	55.4	51.6	53.1	55.3
Syria	MICS 2006	35.1	28.2	29.6	23.8	23.2
Tunisia	MICS 2011	15.7	9.2	1.4	9.1	7.1
Yemen	DHS 2013	10.0	10.7	10.4	9.8	6.6
Mean±SD		**32.8±14.4**	**33.3±16.7**	**30.9±15.9**	**28.5±16.4**	**28.3±15.9**

*WQ: wealth quintile. WQ1 represents the lowest fifth poorest sector of the population and WQ5 represents the fifth richest sector of the population.

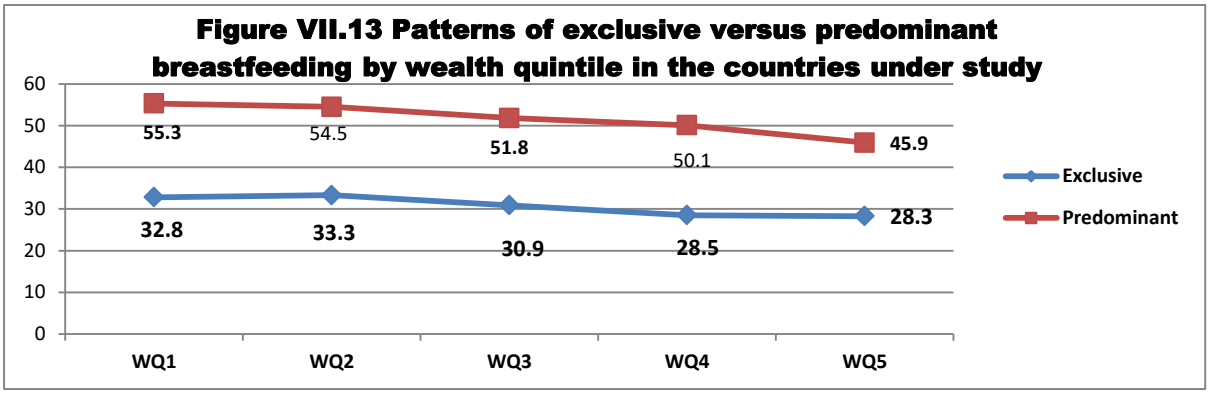


Figure VII.13 shows that PBF showed a higher tendency than EBF to decrease with increasing wealth quintile since PBF decreased from 55.3% in WQ1 to 45.9% in WQ5, compared to EBF that decreased minimally from 32.8% in WQ1 to 28.3% in WQ5. This probably indicates that PBF is more common in the lower wealth quintiles. While it could also indicate, in case of EBF, that the absence of significant differences between wealth quintiles reflects the effect of national campaigns for promotion of EBF. The lower levels in the richest reflect the lack of empowerment for the highly educated women in this wealth index who are not supported in their workplaces to exclusively breastfeed.

Table VII.10 presents the PBF rates by country in relation to wealth. All countries demonstrated a decrease in PBF in the highest WQ except for Afghanistan, Bangladesh and Indonesia. The explanation for such findings requires more in-depth studies.

Table VII.10 Predominant breastfeeding rates wealth quintiles in countries under study (2006 – 2015)

Country PBF	Survey	WQ1	WQ2	WQ3	WQ4	WQ5
Somalia	MICS, 2006	34.6	34.3	23.0	21.1	11.9
Syrian Arab Republic	MICS, 2006	69.8	61.3	56.1	55.9	48.6
Iraq	MICS, 2011	55.3	47.3	45.1	42.0	34.3
Tunisia	MICS, 2011	43.4	38.8	26.0	37.3	23.3

Algeria	MICS, 2012	66.1		66.2	47.5	64.5
Jordan	DHS, 2012	34.5	45.8	33.4	37.4	28.6
Pakistan	DHS, 2013	64.2	56.3	59.5	47.3	46.3
Yemen	DHS, 2013	43.8	42.2	38.9	39.4	33.7
Egypt	DHS, 2014	69.5	75.8	64.2	68.5	59.2
State of Palestine	MICS 2014	49.2	46.5	52.3	49.9	50.0
Sudan	MICS 2014	80.9	77.3	84.4	83.8	70.4
Bangladesh	DHS 2014	59.0	82.3	70.9	72.0	66.2
Afghanistan	DHS 2015	50.9	52.3	55.5	58.9	53.1
Indonesia	DHS 2012	52.9	48.6	49.4	40.8	52.8
Mean±SD		**55.3±13.3**	**54.5±14.8**	**51.8±16.8**	**50.1±15.8**	**45.9±16.7**

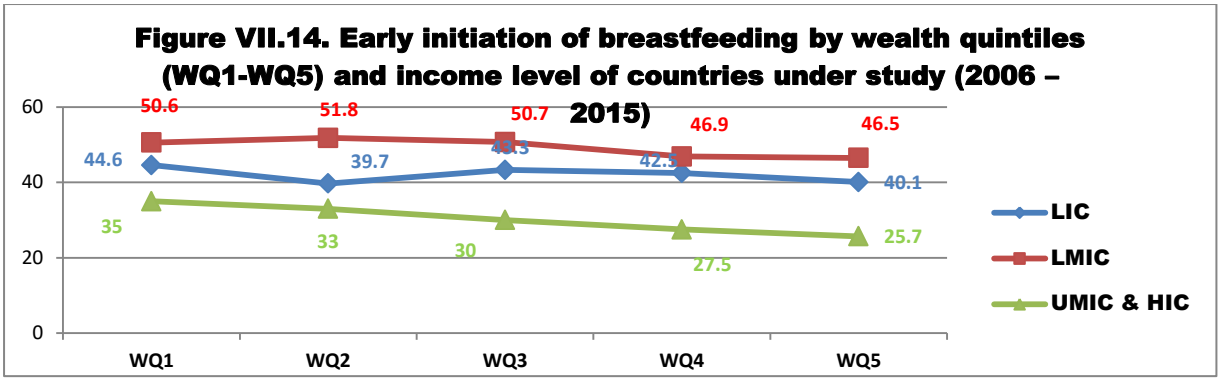
Global database UNICEF, 2018

Early Initiation of breastfeeding

Early initiation of breastfeeding is defined as the percentage of newborns put to the breast within one hour of birth. It is closely associated with the type and place of delivery and practices of birth attendants and whether they were trained in the BFHI or in child birth mother friendly practices that encourage natural child birth, no mother infant separation and early initiation through skin-to-skin contact for one hour or up to the first suckle at the breast.

Table VII.11. Early initiation of breastfeeding by wealth quintile in countries under study (2006 – 2015)

Country	Survey	WQ1	WQ2	WQ3	WQ4	WQ5
Afghanistan	DHS 2015	45.0	40.7	41.0	42.5	35.4
Egypt	DHS 2014	27.9	28.5	30.9	24.8	22.3
Indonesia	DHS 2012	52.6	49.3	47.2	48.8	48.5
Iraq	MICS 2000	17.2	16.1	15.1	10.6	24.4
Iraq	MICS 2011	48.8	41.5	43.3	40.5	37.6
Jordan	DHS 2012	21.2	24.5	16.6	14.4	13.8
Mauritania	MICS 2015	64.9	65.8	63.8	55.4	58.5
Pakistan	DHS 2013	21.7	17.1	17.2	12.8	21.9
State of Palestine	MICS 2014	40.7	40.1	42.3	40.5	40.6
Sudan	MICS 2014	62.1	69.8	73.1	68.2	71.3
Syrian Arab Republic	MICS 2006	33.6	29.3	36.2	32.6	30.5
Tunisia	MICS 2011	45.5	45.3	38.6	37.4	32.1
Yemen	DHS 2013	55.2	49.1	52.8	52.4	54.5
Mean±SD		**41.3±15.2**	**39.8±16.0**	**39.8±16.8**	**36.9±16.9**	**37.8±15.9**



LIC: Low Income countries included Afghanistan, Somalia, Syria and Yemen. LMIC: Low middle income countries included Algeria, Egypt, Mauritania, Sudan and Tunisia.HIC & UMIC: High & Upper middle Income countries included Jordan and Iraq.

EIBF was highest in the LMIC and lowest in the HIC & UMIC countries. The LMIC showed initiation rates that were parallel with the LIC and were not influenced by quintile level. However EIBF in the UMIC decreased progressively with increasing quintile level indicating that the quintile level did influence EIBF. This is probably because those in higher quintiles of wealth are more inclined to give birth in private costly health services that practice more medicated births especially cesarean section and separate baby from mother. Also formula feeding and non Baby-friendly practices are more common in the private sector. This indicates that governments should be working on both the public and private sector in making all services abide by the ten Steps of the Baby-Friendly Hospital Initiative (BFHI). Particular attention should be given to university hospitals that play the double role of providing services and shaping the practices of the future health care force of the country (***Abul-Fadl et al., 2018***).

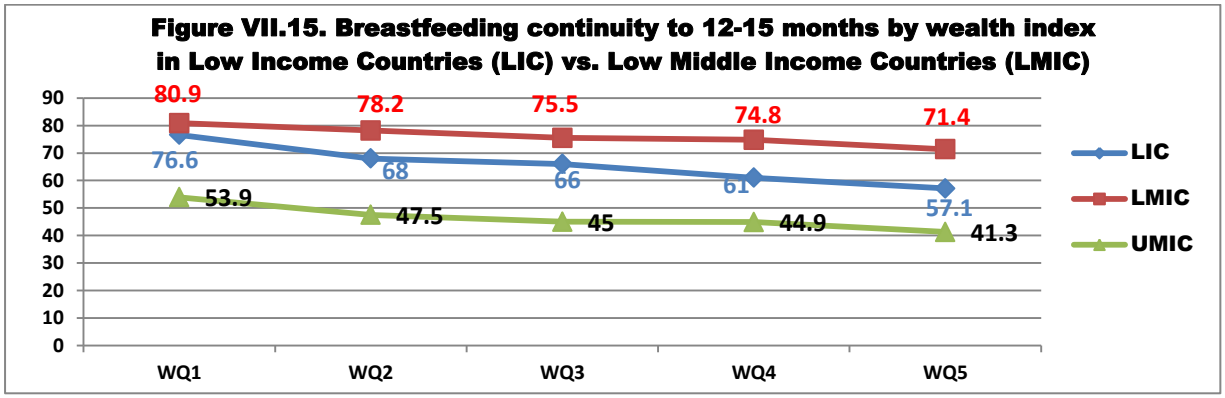
Breastfeeding continuity

The relationship between wealth, socioeconomic status and breastfeeding duration was studied by a team of research workers in Sweden who found that all socioeconomic factors; maternal educational level, maternal unemployment benefit, social welfare and equivalent disposable income, were strongly associated with breastfeeding when examined individually in mothers of preterm and term infants. They found that despite all the social welfare and support given to unemployed mothers, mothers of preterm babies weaned earlier than those with full term babies (***Flaking et al., 2007***).

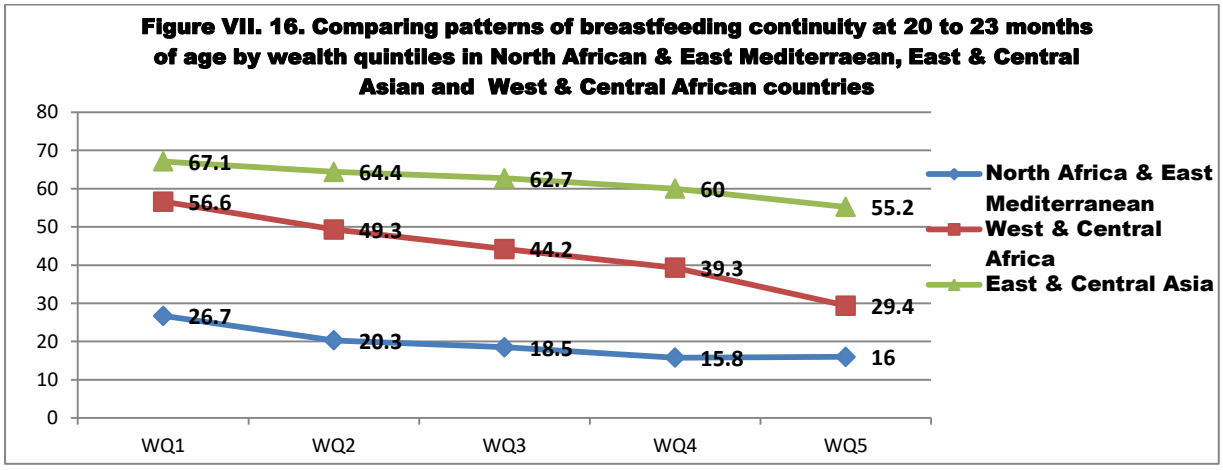
Table VII.12. Breastfeeding continuity to 12-15 months by wealth quintiles in the countries under study

Country	Survey	National	WQ1	WQ2	WQ3	WQ4	WQ5
Afghanistan	**DHS, 2015**	78.4	86.1	75.1	79.6	77.5	74.5
Algeria	**MICS 2012**	46.7	45.1	47.0	46.4	50.7	44.2
Bangladesh	**DHS 2014**	96.0	97.8	98.4	95.1	93.3	95.7
Egypt	**DHS 2014**	80.0	86.4	77.9	85.0	76.5	72.7
Indonesia	**DHS 2012**	77.2	86.6	79.5	80.1	69.5	69.2
Iraq	**MICS 2011**	51.5	61.3	52.5	52.0	43.3	42.0
Jordan	**DHS 2012**	43.5	55.2	43.0	36.7	40.8	37.7
Mauritania	**MICS 2015**	85.6	81.7	90.5	86.6	92.0	76.1
Pakistan	**DHS 2013**	80.6	88.6	84.2	77.0	76.0	73.6
Somalia	**MICS 2006**	50.2	71.0	64.5	52.4	36.7	25.5
State of Palestine	**MICS 2014**	52.9	65.6	60.1	48.0	41.8	47.2
Sudan	**MICS 2014**	89.4	84.7	90.5	91.6	86.7	94.5

Syrian Arab Republic	**MICS 2006**	63.9	73.2	63.3	57.9	62.7	60.9
Tunisia	**MICS 2011**	49.2	61.3	46.0	45.0	57.4	40.0
Yemen	**DHS 2013**	71.2	76.3	69.3	74.1	67.1	67.3
Mean±SD		67.3±16.4	74.7±14.1	69.5±16.9	67.2±18.8	64.8±18.4	61.4±20.3



CBF for one year (12-15 months) was highest in the LMIC (81% to 71.4%) compared to LIC (68% to 57%) and UMIC (54% to 41%) from WQ1 to WQ5 respectively (Figure VIII.4). However it was much lower among UMIC. All three categories showed a progressive decline with increasing socioeconomic class. However, breastfeeding continuity in the richest mothers (WQ5) in the LIC were almost one half that in UMIC and HIC. The decline by wealth status was double that in the LMIC and UMIC (i.e. CBF showed a decline by approx. 20 points in LIC vs. a decline of approx. 10 points in the UMIC and LMIC) as shown in figure VIII.4. Hence both wealth and developmental class of the country influenced this practice and not only the wealth per se of individuals.



North African & East Mediterranean countries include Egypt, Algeria, Tunisia, Syria, State of Palestine and Jordan.
West & Central African countries include Sudan, Somalia, Mauritania, Niger and Nigeria.
East and Central Asia include Iraq, Afghanistan, Pakistan, Bangladesh and Indonesia.

The discrepancy in CBF at two years between income groups and across quintile groups was even significantly greater. We noticed that countries in the EMR had the lowest CBF rates at 20-23 months. These countries differed from other countries in other regions particularly Central and West Africa and also Central and East Asia where CBF at this age was much higher as it doubled and tripled respectively, across the wealth quintiles. This may be related to limited access to other foods and reliance on breastfeeding as the main source of

nourishment. Hence the longer duration of breastfeeding is linked to its nutritional value as a food resource and its protective value against disease for these highly vulnerable children at this age. Their traditional experience and historical memory that was transferred from one generation to another showed them that children survive better, in their environment, when they are breastfed. Nature has been their teacher and guide in feeding their offspring and the marketing of industrialized foods did not alter this, but did influence the higher classes that could afford expensive foods and this explains the shorter duration of breastfeeding in the upper classes of wealth.

Complementary Feeding

Complementary feeding (CF) is assessed by three main indicators, timely introduction of foods at 6-8 months, meal frequency and meal diversity, among many other indicators for assessing iron consumption and other micronutrient intakes.

Adherence to optimum CF practices is very important for child survival together with breastfeeding. A study in Uganda showed that only 40.1% (140/349) of all study respondents were adherent to CF guidelines. The odds of adherence to CF were higher among caregivers with children aged 6-8 months, children whose fathers had attained 8 or more years of formal education, caregivers with two children under five years, those living in the poorest households and those who showed willingness to recommend initiation of complementary feeding at six months to another mother (***Aber et al., 2018***). ***Al-Shookri (2011)*** in Oman showed that mothers play a pivotal role in providing adequate CF to their children. They showed that mothers with higher education but who were not working achieved high scores of adequate CF.

However in countries of low income status which are prevalent in Central and West African countries, adherence to adequate CF is low especially in rural areas. Hence, this necessitates urgent interventions such as health education and raising awareness through social media and other communication strategies.

Minimal Meal Frequency (MMF)

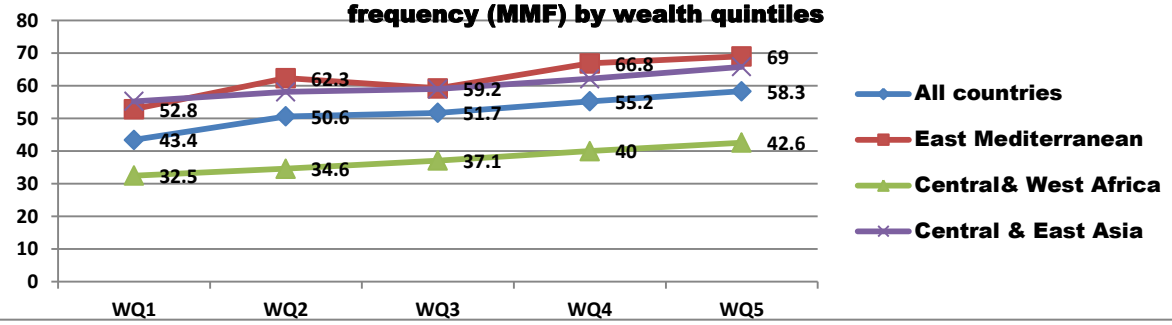
MMF is defined as the percentage of children 6-23 months of age who were fed solid, semi-solid or soft foods the minimum number of times or more during the previous day AND the number of non-breastfed children 6–23 months of age who received solid, semi-solid or soft foods or milk feeds the minimum number of times or more during the previous day in relation to all children (breastfed and non-breastfed) aged 6-23 months at the time of the survey. Minimum is defined as: 2 times solid, semi-solid or soft foods for breastfed infants 6–8 months of age; 3 times solid, semi-solid or soft foods for breastfed children 9–23 months of age; and 4 times solid, semi-solid or soft foods and/or milk feeds for non-breastfed children 6–23 months of age.

Table VII. 13. Minimal Meal Frequency (MMF) by wealth quintiles in the countries under study

Country	Survey	WQ1	WQ2	WQ3	WQ4	WQ5
Afghanistan	DHS, 2015	54.1	53.3	49.5	51.4	48.2
Algeria	MICS, 2012	48.0	52.2	51.5	53.5	56.1
Bangladesh	DHS, 2014	55.2	61.8	65.3	67.8	68.9
Egypt	DHS, 2014	57.8	54.7	59.7	59.2	70.8
Indonesia	DHS, 2012	59.4	66.0	65.9	66.0	73.5
Iraq	MICS, 2011	50.2	52.4	53.7	59.7	60.9
Jordan	DHS, 2012	78.5	74.7	84.4	82.6	87.3
Mauritania	MICS, 2011	16.6	14.7	13.2	20.7	30.1
Mauritania	MICS, 2015	36.7	34.7	34.4	44.9	44.4
Pakistan	DHS, 2013	57.0	56.8	60.4	65.8	77.4

Niger	DHS, 2006	38.3	42.0	42.4	42.5	45.2
Niger	DHS, 2012	44.9	50.3	51.7	56.6	51.7
State of Palestine	MICS, 2010	54.9	58.7	57.7	59.8	62.8
State of Palestine	MICS, 2014	74.0	79.0	75.8	83.9	83.6
Sudan	MICS, 2010	24.2	30.6	35.6	27.8	34.5
Sudan	MICS, 2014	34.3	35.3	45.3	47.5	49.8
Tunisia	MICS, 2011	29.5	49.2	44.1	56.9	60.8
MMF in Mean±SD		43.4± 18.5	50.6± 17.4	51.7± 13.9	55.2±18.2	58.3±16.1

Figure VII.17. Comparison of regional differences in minimum meal frequency (MMF) by wealth quintiles



Eastern Mediterranean countries are represented in Egypt, Algeria, Tunisia, State of Palestine and Jordan. Central and West African countries are represented in Sudan, Niger, and Mauritania. Central and East Asia are represented in Afghanistan, Bangladesh, Iraq, Indonesia and Pakistan.

The concept that foods can replace breastmilk and breastfeeding is a common and dangerous misconception that is unfortunately very common in many communities. Breastmilk contributes as a source for energy, proteins, vitamins and minerals, meeting up to 30% or more of the needs of children at this age. However its value is not limited to nutrition and its value goes beyond providing nutrients and energy to providing other immunological, metabolic and psychological and developmental benefits to both the child and the mother. Hence it is important to make mothers aware of the importance of continuing breastfeeding while ensuring adequate food frequency and diversity given to the child.

Another important misconception that always worries mothers is the quantity of foods given to the child. Weaning foods do not have to be in big quantities, rather it is important to emphasize frequency and diversity rather than quantity to these mothers. When big portions are given to children especially when it is diluted or forced to them by bottles and other forced feeding methods, this interferes with food uptake, utilization and digestion and has negative effects on breastfeeding and on thereby on the growth and development of children. Forced feeding has been shown to be linked with behavioural disorders and shortened duration of breastfeeding (.

Minimum Dietary Diversity (MDD)

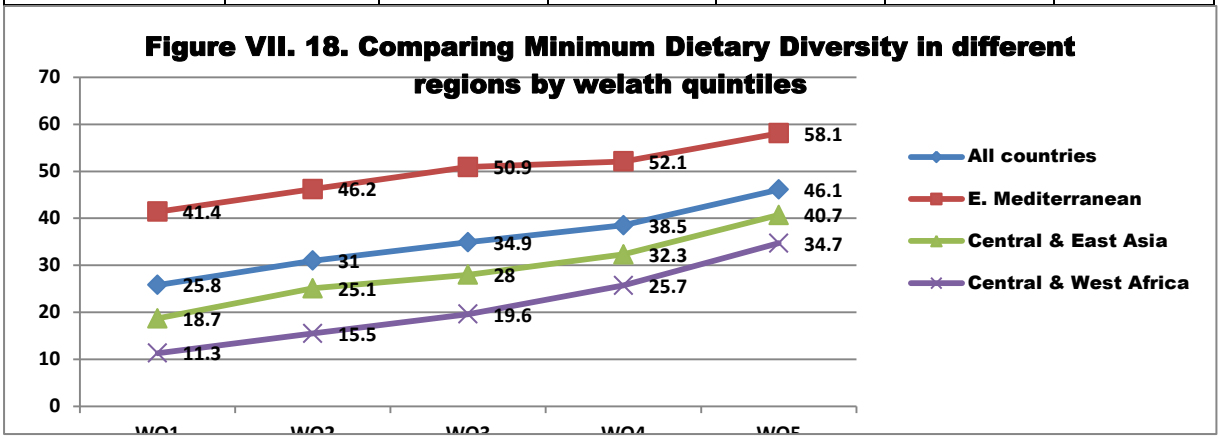
MDD is defined as the percentage of children 6-23 months of age who received a minimum diet diversity of at least >5 food groups (out of 8) in the previous day of the survey in relation to all children (breastfed and non-breastfed) aged 6-23 months at the time of the survey. The eight food groups are: (i) breastmilk; (ii) grains, roots and tubers; (iii) legumes and nuts; (iv) dairy products (infant formula, milk, yogurt, cheese); (v) flesh foods (meat, fish, poultry and liver/organ meats); (vi) eggs; (vii) vitamin-A rich fruits and vegetables; (viii) other fruits and vegetables.

Dietary diversity is one of the most important features of optimal complementary feeding. Dietary diversity refers to receiving foods from

at least four out of seven food groups. These seven food groups included grains, legumes and nuts; flesh foods; eggs; dairy products; roots and tubers; Vitamin A-rich fruits and vegetables; and other fruits and vegetables. MDD includes consumption of at least one fruit or vegetable, one animal-source food, and a staple food. Consuming a variety of foods has a critical role in responding to essential nutrient requirements needed to promote growth (***Karimi-Shahanjarini et al., 2017***).

Table VII.14. Minimal Dietary Diversity (MDD) by wealth quintiles in the countries under study

Country	Survey	WQ1	WQ2	Q3	WQ4	WQ5
Afghanistan	DHS, 2015	18.1	25.2	15.1	17.8	34.5
Bangladesh	DHS, 2011	12.6	17.1	25.8	31.6	34.8
Bangladesh	DHS, 2014	16.9	22.6	27.2	31.1	36.2
Egypt	DHS, 2005	45.6	55.0	59.1	56.2	66.3
Egypt	DHS, 2008	39.8	44.3	48.0	47.6	55.4
Egypt	DHS, 2014	37.2	32.1	34.9	34.1	35.7
Indonesia	DHS, 2012	35.0	47.1	55.0	58.3	69.5
Jordan	DHS, 2007	60.3	63.6	73.6	71.1	74.1
Jordan	DHS, 2012	27.0	36.7	38.0	46.0	53.0
Mauritania	MICS, 2015	14.1	20.3	28.4	35.1	45.4
Pakistan	DHS, 2013	10.6	13.7	16.7	22.6	28.6
State of Palestine	MICS, 2014	38.6	45.2	52.0	57.8	64.3
Sudan	MICS 2014	9.3	15.9	22.7	26.8	51.5
Yemen	DHS, 2013	11.8	12.2	19.2	30.5	38.3
Niger	DHS, 2012	10.0	13.5	8.0	10.5	3.5
MDD in Mean±SD		**25.8±15.4**	**31.0± 16.1**	**34.9±18.2**	**38.5±16.5**	**46.1± 18.0**



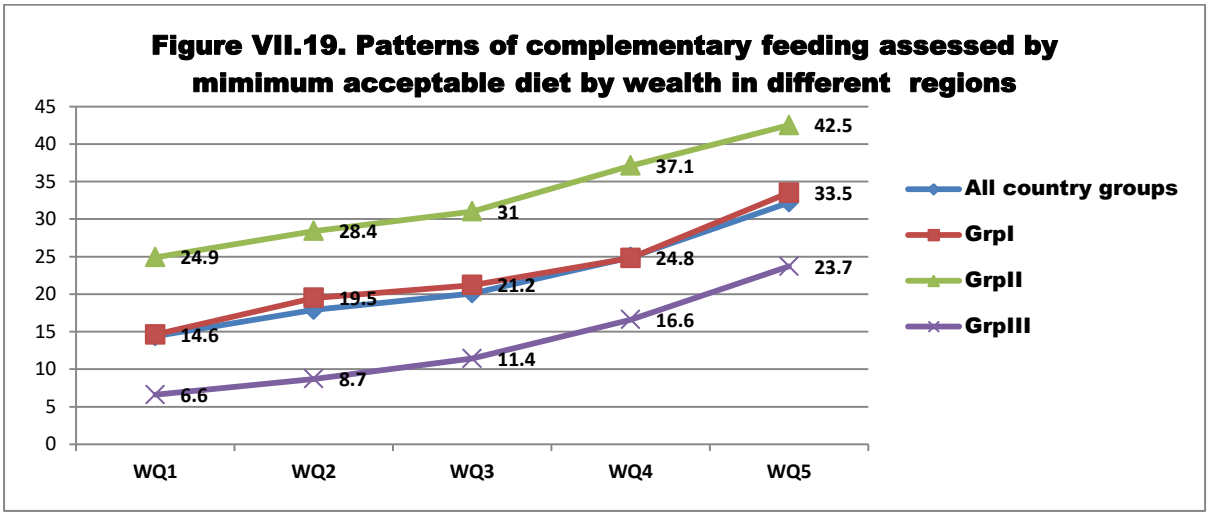
Eastern Mediterranean countries are represented in Egypt (2005, 2008, 20014), State of Palestine and Jordan (2007, 2012). Central West African and gulf countries are represented in Sudan, Niger, Mauritania and Yemen. Central and East Asia are represented in Afghanistan, Bangladesh, Indonesia and Pakistan.

Minimum Acceptable Diet (MAD) and Wealth Quintiles (WQ)

MAD is defined as the percentage of children 6-23 months of age who received a minimum acceptable diet i.e. who had at least the minimum dietary diversity and the minimum meal frequency during the previous day AND Non-breastfed children 6-23 months of age who received at least two milk feedings and had at least the minimum dietary diversity not including milk feeds and the minimum meal frequency during the previous day to all children (breastfed and non-breastfed) aged 6-23 months at the time of the survey. This is demonstrated in the table below by wealth quintile in the latest national survey for each country.

Table VII. 15. Minimal acceptable diet (MAD) in percent by wealth quintiles

Country	Survey	WQ1	WQ2	WQ3	WQ4	WQ5
Niger	DHS 2012	2.7	3.1	3.5	5.5	12.9
Afghanistan	DHS 2015	12.4	17.9	10.9	13.1	23.3
Bangladesh	DHS 2014	14.3	17.8	22.3	27.7	32.9
Egypt	DHS 2014	25.0	21.3	22.7	22.5	25.8
Indonesia	DHS 2012	23.2	32.5	37.6	39.4	51.7
Jordan	DHS 2012	21.2	30.5	32.4	41.6	47.8
Mauritania	MICS 2015	7.2	10.9	10.9	21.3	22.0
Pakistan	DHS 2013	8.6	9.7	13.7	19.0	26.0
State of Palestine	MICS 2014	28.6	33.4	38.0	47.2	53.9
Sudan	MICS 2014	5.8	10.7	14.0	16.9	29.6
Yemen	DHS 2013	8.8	8.9	15.1	20.2	28.0
MAD Mean±SD		**14.4± 8.4**	**17.9±9.9**	**20.1± 11.03**	**24.9±12.2**	**32.2±12.6**



Group I include Afghanistan, Bangladesh, Pakistan and Indonesia (mostly Central and East Asia, notice MAD doubled by increasing wealth). Group II include Egypt, State of Palestine and Jordan (These are mostly East Mediterranean and North Africa countries, notice MAD increased by less than double by increasing wealth). Group III include Mauritania, Sudan, Niger and Yemen (These countries are mostly in Central Africa and the adjoining gulf region, notice that MAD increased by 3-4 times by increasing wealth).

Wealth and regional differences related to feeding patterns are linked with environmental, traditional and climate factors that allow for growth and availability of different foods that are suitable for feeding children at this age. In the figure (VII.8) we notice that some regions were influenced by the level of wealth; as foods may be costly and beyond the affordability of communities in lower wealth quintiles. For instance in the rainy seasons in Central and West Africa draughts are common, whereas in the Mediterranean region foods are available all the year round. The latter countries may still be influenced by wealth as is the case of the EMR, where although Mediterranean foods as staples, tuber or root plants and legumes are accessible and affordable to all levels of the population yet the chronic emergencies and conflicts interfere with the growth of the economy and make such products scarce. While in regions which are mostly mountainous or where forests or deserts prevail and draughts or heavy rain are common, these natural disasters cause foods scarcity thereby only the wealthy can access them. This is shown clearly in group III countries and to a less extent in group I countries presented by

geographic location in figure VII.19. Unfortunately many LIC and LMIC rely on imported food products from upper income countries increasing the debt of these former countries and making living costly and unaffordable especially for poor people and thereby increasing the toll of poverty in the world. Hence it is important to consider means for encouraging populations to access means for producing their own foods and using their natural resources in their homes and encourage local production and consumption and commercial activities of exchanging products between neighboring countries. Moreover, food preparation classes are useful in teaching communities how to use local foods to their best possible potential for providing a diversified meal. In Egypt the Teaching kitchen program was very useful in changing food preparation practices by communities. Today the wide availability of online videos and social media can allow the dissemination of such information on awide scale with little cost.

Conclusions

Our review showed that the socioeconomic status of a country does influence breastfeeding patterns. EBF in countries with relatively higher EBF (>40%) decreased more by increasing WQ than countries with EBF<40%. The decline in PBF (19 points) by wealth was more evident than EBF (5 points). CBF for one year was highest in LMIC and decreased as the WQ increased from WQ1 to WQ5. CBF to one year was highest in the LMICs and decreased less across quintiles compared to other income groups. The decline between WQ1 and WQ5 was especially high in LIC (76.6% to 57.1%) than in LMIC (81% to 71.4%) and UMIC (53.9% to 41.3%).

There were more significant findings by region in relation to wealth quintiles and breastfeeding continuity. By region, CBF for two years between was lowest in the North Africa and East Mediterranean strip of countries decreasing from 26.7% in WQ1 to 16% in WQ5 compared to 56.6% and 67.1% in WQ1 for the West & Central Africa and the East and Central Asian countries. The decrease across the WQs was more significant for the West & Central African countries from 56.6% to 29.4% (26 points) compared to 8 points decrease from WQ1 to WQ5 in the East and Central Asian countries. These findings indicate that the problems of CBF for two years are highest in African countries particularly in North Africa and in particular among the high socioeconomic groups (WQ5).

Women in Central & West African countries had the lowest practices in MMF and MDD and consequently in MAD. MMF and MDD was slightly higher in the countries of central and East Asia. However MMF and MDD and thereby MAD was highest in countries of North Africa and the East Mediterranean. All these complementary feeding practices increased by wealth level but the increase was highest –three fold (from 11.3% in WQ1 to 34.7% in WQ5) and two folds- from 18.7% to 40.7% in WQ5 in countries of Central and East Asia, and by 7 points only – from 41.4% in WQ1 to 58.1% in WQ5. Hence the wealth difference was also lowest in the North African and East Mediterranean countries. This indicates that there is a high accessibility of a variety of foods in this region.

In conclusion there is a high threat to Breastfeeding continuity to years as the economic standard of countries continues to improve. Breastmilk contributes as a source for energy, proteins and vitamins and minerals, meeting up to 30% or more of the needs of children at this age. However its value is not limited to nutrition and its value goes beyond providing nutrients and energy to providing other immunological, metabolic and psychological and developmental benefits to both the child and the mother. Hence it is important to make mothers aware of the importance of continuing breastfeeding while ensuring adequate food frequency and diversity given to the child.

The success stories of North African and East Mediterranean countries in CF reflected by their high MMF, MDD and MAD should be used as lessons learnt to be disseminated to other countries with less privileged indicators in CF.

V11.3 Summary and Conclusions

Our review showed that the socioeconomic status and level of education of the mother can influence breastfeeding patterns.

EBF was lowest in the UMIC with no significant differences between educational levels except for showing a slight trend to increase among women with secondary education. LMIC showed a marked decrease in EBF among the highly educated mothers. EBF tended to be decrease with increasing wealth in countries with relatively higher EBF (>40%) more than in countries with EBF<40%.

PBF was highest among illiterate mothers and decreased with increasing level of education. The decline in PBF (19 points) by wealth was more evident than EBF (5 points). CBF for one year was highest in LMIC and decreased as the WQ increased from WQ1 to WQ5.

EIBF was highest in Sudan, Mauritania and Sudan where natural and home deliveries are more common. It was lowest in Iraq and Pakistan. EIBF was lowest in the UMIC and particularly among mothers with higher levels of education (22.7% in the highly educated vs. 33.5% in the illiterate mothers). It was mostly influenced by place of delivery being lowest in those in the highest wealth quintile and vice versa.

CBF for one year (12 to 15 months) was highest in the illiterate mothers (74.46±11.21) and decreased progressively by increasing level of education to 63.4±20.4 in the highly educated. CBF to one year was highest in the LMICs and decreased less across quintiles compared to other income groups. The decline between WQ1 and WQ5 was especially high in LIC (76.6% to 57.1%) than in LMIC (81% to 71.4%) and UMIC (53.9% to 41.3%). CBF at 20-23 months that decreased by one half with increasing level of education from almost 40% in the illiterate to 22% in the highly educated mothers.

There were more significant findings by region in relation to wealth quintiles and breastfeeding continuity. By region, CBF for two years was lowest in the North Africa and East Mediterranean strip of countries decreasing from 26.7% in WQ1 to 16% in WQ5 compared to 56.6% and 67.1% in WQ1 for the West & Central Africa and the East and Central Asian countries. The decrease across the WQs was more significant for the West & Central African countries from 56.6% to 29.4% (26 points) compared to 8 points decrease from WQ1 to WQ5 in the East and Central Asian countries. These findings indicate that the problems of CBF for two years are highest in African countries particularly in North Africa and in particular among the high socioeconomic groups (WQ5).

Women with higher levels of education (secondary and high) showed better complementary feeding practices than illiterate mothers or mothers with primary education. Women practices in countries of Central & West African showed the lowest practices in minimum meal frequency (MMF) and minimum dietary diversity (MDD) and consequently in minimum acceptable diet (MAD). MMF and MDD was slightly higher in the countries of central and East Asia. However MMF and MDD and thereby MAD were highest in countries of North Africa and the East Mediterranean with no differences between wealth quintiles indicating a high accessibility of a variety of foods in this region. However these indices were influenced by wealth status as they increased by wealth index in countries of Central Africa and East Asia indicating lack of accessibility to food variety in these regions.

In conclusion there is a high threat to Breastfeeding continuity to two years as the economic standard of countries continues to improve unless action is taken to support career women with higher levels of education to exclusively breastfeed and continue breastfeeding for two years.

Governments seeking to boost their economy need to realize that breastfeeding working women are an important asset to the country that can boost its economy if policies and awareness campaigns are made to favour and support working breastfeeding women in breastfeeding for two years in public and in workplaces.

The success stories of North African and East Mediterranean countries in complementary feeding practices reflected by their high MMF, MDD and MAD should be used as lessons learnt to be disseminated to other countries with less privileged indicators in complementary feeding.

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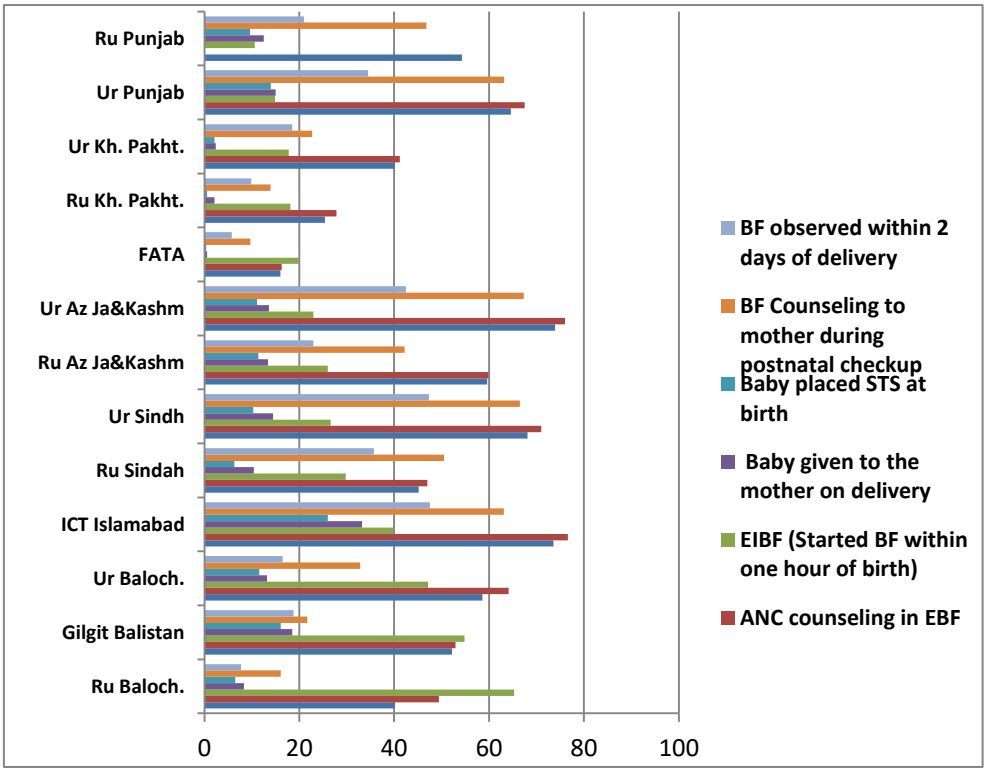
A New Trend in Demographic Health Surveys with Integrated Data about Baby-Friendly Pracfices: The Pakistan Demographic Health Survey (2017-2018) of 2019

For the first time the Demographic Health surveys have included extended data about Baby friendly practices at national and regional level. This was done by Pakistan. The chart shows the percentage of compliance of health staff with breastfeeding education, counseling and support provided to pregnant and breastfeeding mothers in maternity facilities before, during and after birth at national and regional level by EIBF. This trend can pave the way to a new vision to sustaining and comparing progress in Baby-friendly Hospital Initiative between regions and countries for reinforcement of the continuity of the warm chain of breastfeeding support.



Ur: urban, Ru: Rural, Kh. Pakht.: Khyber Pakhtunkhwa Baloch.: Balochistan Az Ja&Kashm: Azad Jammu &Kashmir, ANC: antenatal care, BF: breastfeeding, EBF: exclusive breastfeeding, EIBF: early initiation of BF, STS: skin-to-skin.

المقال السابع : المحددات الاجتماعية التي تؤثر على أنماط تغذية الرضع

الملخص و الاستنتاجات

أظهرت الدراسة أن الحالة الاجتماعية والاقتصادية ومستوى تعليم الأم يلعبون دوراً هاماً على أنماط تغذية الرضع.

فقد وجدنا إنخفاضاً في الرضاعة الطبيعية المطلقة في مجموعة بلدان الدخل المتوسط الأعلى مع عدم وجود فروق مؤثرة بين المستويات التعليمية إلا أنها كانت مائلة للزيادة مع الحاصلات على تعليم ثانوي.

أما بلدان الدخل المتوسط الأدنى فقد أظهرت انخفاضاً ملحوظاً فى معدلات الرضاعة الطبيعية المطلقة بين الأمهات المتعلمات تعليماً عالياً . كما وجدنا انخفاض فى الرضاعة المطلقة مع زيادة الثروة في البلدان التى ترتفع فيها نسبة الرضاعة المطلقة أكثر من 40 في المائة بالمقارنة إلى البلدان التى تقل فيها الرضاعة المطلقة عن 40 في المائة.

وبالنسبة للرضاعة الطبيعية الغالبة فقد كانت أعلى فى فئة الأمهات الأميات و كانت تقل مع ارتفاع فى مستوى التعليم. وعندما قورنت إلى مستوى المعيشة فقد انخفضت انخفاضاً شديداً مع انخفاض في مستوى المعيشة (19 نفطة) بالمقارنة إلى الرضاعة المطلقة التى انخفضت 5 نقاط فقط مع انخفاض في مستوى المعيشة.

كان أن البدء المبكر بالرضاعة الطبيعية أعلى في السودان وموريتانيا والسودان حيث الولادة الطبيعية المنزلية أكثر شيوعا ، بينما كان أدنى مستوياتها في العراق وباكستان. وكما كانت منخفضة في بلدان ذات الدخل المتوسط الأعلى وخاصة بين الأمهات بمستويات التعليم العالي (22.7 في المائة في التعليم العالي مقابل 33.5 في المائة في الأمهات الأميات) حيث تتم معظم الولادات في المستشفيات وبالأخص في المستشفيات الخاصة التي لا تهتم بتطبيق الممارسات التي تساعد على نجاح الرضاعة الطبيعية ويزداد ذلك مع الأمهات المقتدرات اللاتي يفضلن الرعاية الخصوصية بمستشفي ولادة خاصة.

كانت الرضاعة الطبيعية المستمرة لمدة عام واحد (من 12 إلى 15 شهرًا) أعلى في الأمهات الأميات (74.46 ± 11.21) وانخفضت تدريجياً مع زيادة مستوى التعليم إلى 63.4 ± 20.4 في المتعلمات تعليماً عالياً. كما كانت معدلات الاستمرار بالرضاعة الطبيعية لعام واحد أعلى في البلدان منخفضة ومتوسطة الدخل وانخفضت بنسبة أقل عبر الخُمس مقارنة بفئات الدخل الأخرى. كان الانخفاض بين خُمس الثروة الأول (الفقراء) وخُمس الثروة الخامس (الأغنياء) مرتفعًا بشكل خاص في بلدان الدخل المنخفض (76.6 في المائة إلى 57.1 في المائة) مقارنة بالبلدان الدخل المتوسط المنخفض (81 في المائة إلى 71.4 في المائة) وبلدان متوسطة الدخل الأعلى (53.9 في المائة إلى 41.3 في المائة). أما استمرار الرضاعة الطبيعية لعامين أى من عمر 20 إلى 23 شهرًا ، فقد انخفضت إلى النصف مع زيادة مستوى التعليم من حوالي 40 في المائة في الأميات إلى 22 في المائة في الأمهات المتعلمات تعليماً عالياً.

كانت هناك نتائج أكثر أهمية حسب المنطقة فيما يتعلق بخماسي الثروة واستمرارية الرضاعة الطبيعية. فحسب المنطقة ، فكانت معدلات الاستمرار في الرضاعة الطبيعية لمدة عامين متدنية في منطقة شمال إفريقيا وشرق البحر المتوسط من البلدان الأخري ، حيث انخفضت من 26.7 في المائة في الربع الأول إلى 16 في المائة في الخمسي الأعلى مقارنة إلى 56.6 في المائة و 67.1 في المائة في خُمس الثروة الأدنى فى بلدان غرب ووسط أفريقيا و دول شرق ووسط آسيا. كان الانخفاض في جميع مستويات

الخماسيات أكثر أهمية بالنسبة لدول غرب ووسط أفريقيا من 56.6 في المائة إلى 29.4 في المائة (26 نقطة) مقارنة مع انخفاض 8 نقاط من خماسي الثروة الأدنى (1) إلى خماسي الثروة الأعلى (5) في بلدان شرق ووسط آسيا. تشير هذه النتائج إلى أن مشاكل استمرار الرضاعة الطبيعية لمدة عامين هي الأعلى في البلدان الأفريقية ، ولا سيما في شمال إفريقيا ، وخاصة بين المجموعات الاجتماعية والاقتصادية العالية (خُمس الثروة 5) حيث يوجد فورق اقتصادية كبيرة بين المستويات الإجتماعية.

وقد أظهرن النساء الأعلى تعليماً (الثانوي والعالي) ممارسات تغذية تكميلية أفضل من الأمهات الأميات أو الأمهات الحاصلات على تعليم ابتدائي. سجلت ممارسات النساء في بلدان وسط وغرب إفريقيا أدنى الممارسات في الحد الأدنى لتواتر الوجبات والحد الأدنى من التنوع الغذائي وبالتالي في الحد الأدنى المقبول من النظام الغذائي. كان الحد الأدنى لتواتر الوجبات والحد الأدنى للتنوع الغذائي أعلى قليلاً في بلدان وسط وشرق آسيا. ومع ذلك ، كان الحد الأدنى لتواتر الوجبة والحد الأدنى من التنوع الغذائي وبالتالي الحد الأدنى من النظام الغذائي المقبول هو الأعلى في بلدان شمال إفريقيا وشرق البحر الأبيض المتوسط مع عدم وجود فروق بين خماسي الثروة مما يدل على توافر وإمكانية الحصول على الأطعمة المتنوعة في هذه المنطقة. ومع ذلك ، تأثرت هذه المؤشرات بالفقر لأنها زادت بمؤشر الثروة في بلدان وسط إفريقيا وشرق آسيا مما يشير إلى عدم توافر أو إمكانية الحصول على الأغذية المتنوعة من المواد الغذائية في هذه المناطق لجميع المستويات الاجتماعية.

وفي الختام ، هناك تهديد كبير لاستمرارية الرضاعة الطبيعية للسنتين الحرجتين من حياة الطفل وذلك لوجود فوارق كبيرة في المستوى الاقتصادي للبلدان فالنساء الفقراء معظمهن غير متعلمات أما الأمهات المتعلمات بتعليم عال لا تحصلن على الدعم الكافي لمواصلة للرضاعة الطبيعية المطلقة لمدة 6 شهور واستمرار الرضاعة الطبيعية لمدة عامين. ولذا تحتاج الحكومات الطموحة التى تسعى لتعزيز اقتصادها إلى التيقن بأن الأمهات المرضعات العاملات هن مورد هام للبلد يمكن استغلاله لرفع الاقتصاد القومى، وذلك إذا تم وضع سياسات لدعم هؤلاء الأمهات فى الرضاعة الطبيعية وحمايتهن بسن القوانين التي تلبي احتياجاتهن للرضاعة المطلقة لمدة 6 شهور والاستمراربها لعامين وعمل حملات لنشر الوعي عن ممارسات التغذية المثلى للرضع في أماكن العمل.

يمكن الاستفادة من قصص النجاح في بلدان شمال إفريقيا وشرق البحر المتوسط في أنماط وممارسات التغذية التكميلية من خلال الحد الأدنى لتكرار الوجبات ، والحد الأدنى من التنوع الغذائي ، وبالتالي الحد الأدنى من النظام الغذائي المقبول ، كدروس مستفادة لنشرها في بلدان أخرى ذات مؤشرات أقل امتيازًا في التغذية التكميلية .

Article VIII

Status of Breastfeeding Promotion in the Eastern Mediterranean Region

Ayoub Al-Jawaldeh, Ghada Sayed, Mona A. Alsumaie, AlBandri AbuNyayan, Khawaja M. Ahmed, Amira M.A. Ali, Leila Alouane, Esmat AlQassim, Wafaa Badawi, Mousa Al-Halaika, Laila ElAmmari, Pamela Z. Mansour, Mohammad Z. Rodwal, Nahla Roushdi, Hind K. Sabeeh, Azza M.A.M. Abul-Fadl.

Overview

Breastfeeding promotion is facing many challenges around the world. Unfortunately, in many countries of the Eastern Mediterranean region (EMR), exclusive breastfeeding (EBF) and continued breastfeeding rates are low and continue to decline. These rates are challenged by the complex emergency situations many countries in the region are facing.

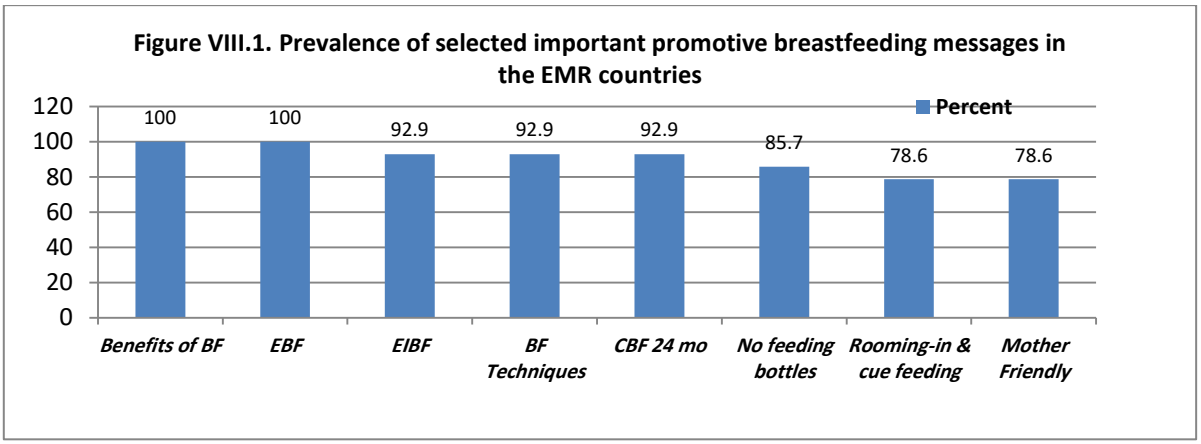
Breastfeeding saves lives and improves overall health and survival of children. However many international intervention programs have been implemented in the countries of the EMR over the past three decades. The countries in the region have had a chance to boost their breastfeeding promotion programs but the lack of sustainability due to withdrawal of funding or onset of unexpected emergency have left many of these interventions face demise. It is thereby important to understand the current status of breastfeeding promotion in order to identify effective strategies that can guide countries to improve their implementation and overcome the barriers and constraints for improving breastfeeding patterns in the region.

A survey was conducted by the Nutrition Unit of the WHO-EMRO to assess the current status of breastfeeding promotion in the EMR countries. A regionally designed questionnaire was designed and sent out to the focal nutrition officers in the 22 countries of the Eastern Mediterranean region (EMR). The questionnaire addressed issues related to breastfeeding communication messages to mothers and influential groups, breastfeeding protection including labeling and counter messages and advocacy issues. Fourteen out of the 22 countries from EMR, responded to the survey by completing the predesigned questionnaires. The countries included: Afghanistan, Egypt, Iraq, Jordon, Kuwait, Lebanon, Morocco, Saudi Arabia, Sudan, Syria, State of Palestine, Pakistan, Tunisia and the United Arab Emirates (UAE). The results were compiled, analyzed and presented in the illustrations in the coming text. Based on the findings, a number of communication strategies were proposed that could be used as guidance for countries, ministries, international agencies, academies and other sectors when implementing breastfeeding promotion programs.

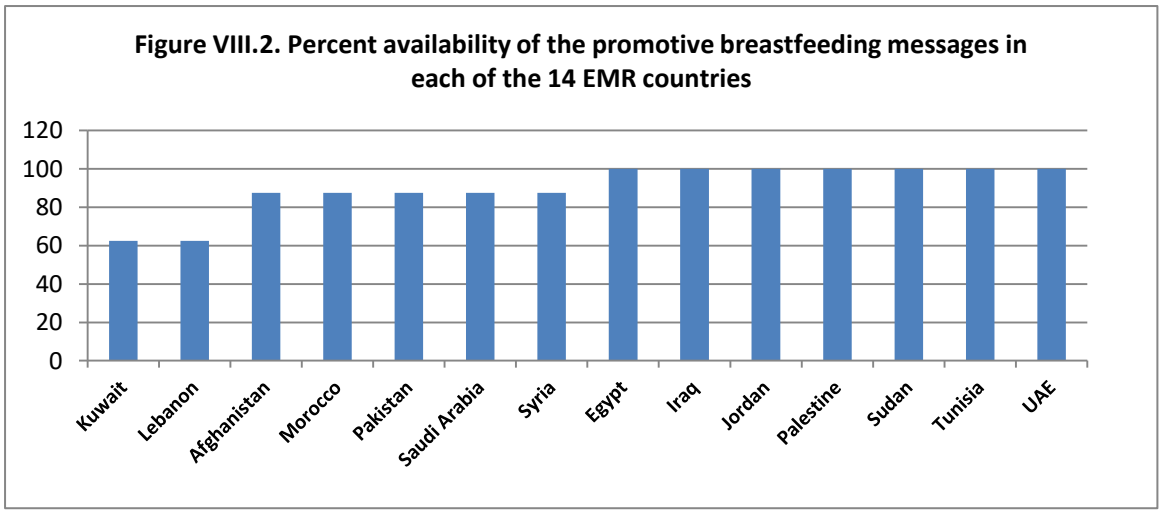
VIII.1. Breastfeeding Educational Messages

A list of the various messages needed to promote optimum breastfeeding are presented in Figure VIII.1. The figure illustrates the percentage of countries in the region that are disseminating these messages. This is further illustrated in figure VIII.2 by country, whereby

the percent availability of these messages by country is presented. Messages that covered benefits of breastfeeding for mothers and babies and EBF were reported to be present by all countries (100%). Messages for promoting timely initiation, rooming-in, continued breastfeeding for two years were reported by 92.9% of countries. Messages for promoting on-demand (to the cue feeding) were reported by 85.7% of countries. Messages that prohibit offering bottles and teats were absent in two countries (14.3%). Messages or information about mother friendly practices was not present in 3 countries (21.4%).



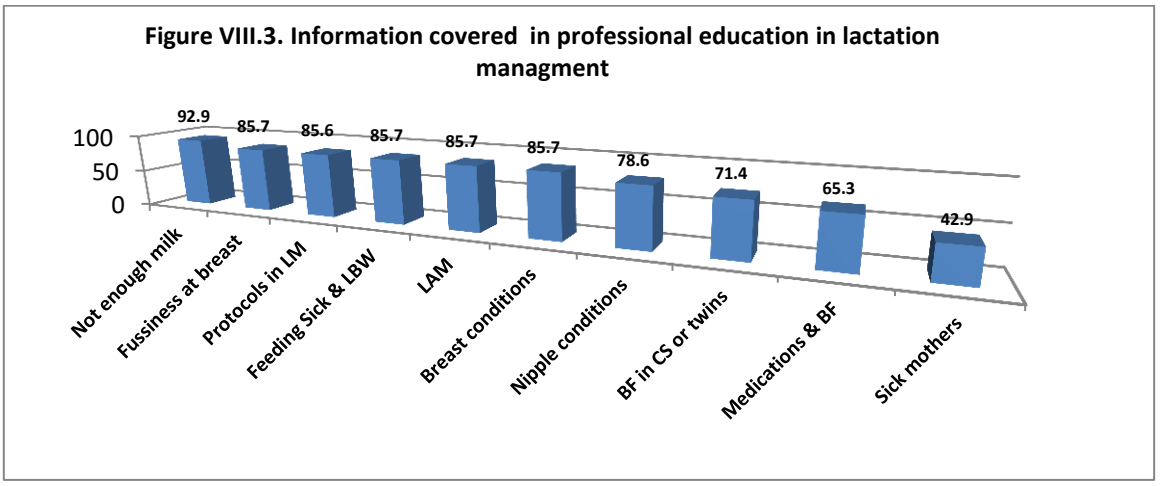
EBF: exclusive breastfeeding, EIBF: Timely initiation of breastfeeding through full bodily skin to skin contact for one hour or more or up to first suckle**, BF: breastfeeding.**



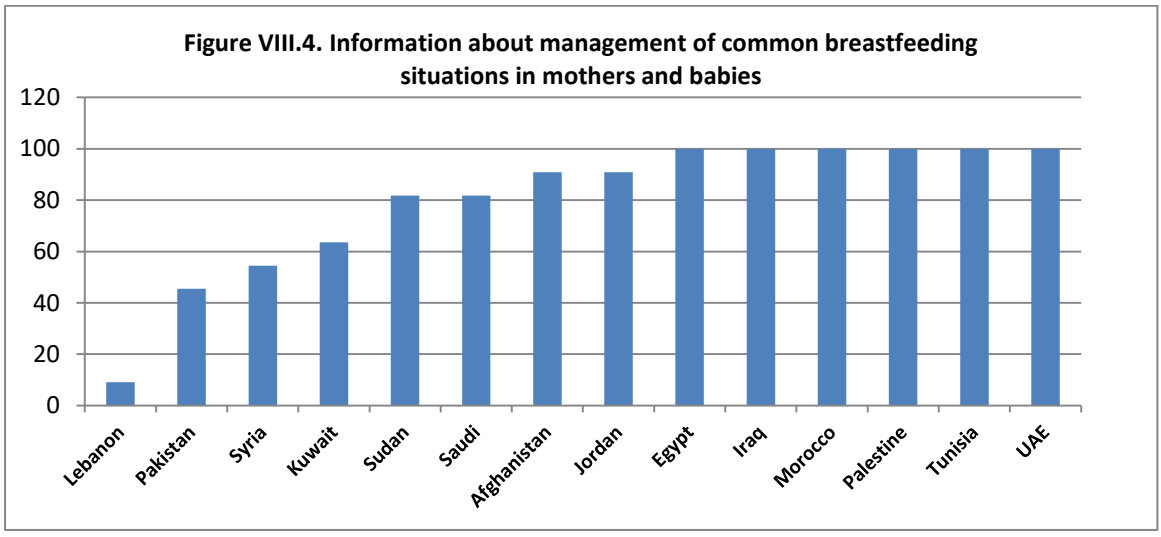
Breastfeeding education: This is intended to cover common problems in breastfeeding. It ranged from 92.9% for "not enough milk", to 42.9% for "managing breastfeeding in sick mothers". This information is for the health professionals and should be simplified to reach mothers and the general public. Protocols need to be developed for health professionals in managing these disorders to assist mothers to continue breastfeeding or to maintain her milk supply by expressing her milk frequently when facing these special situations or medical conditions that require temporary or permanent cessation.

Mothers or babies who are sick need extra help with breastfeeding. Also breastfeeding can unmask disease in babies. So for instance if the baby is reluctant to feed or not suckling effectively, this could be the first sign of sickness and the baby should be properly examined and evaluated. Unfortunately the baby

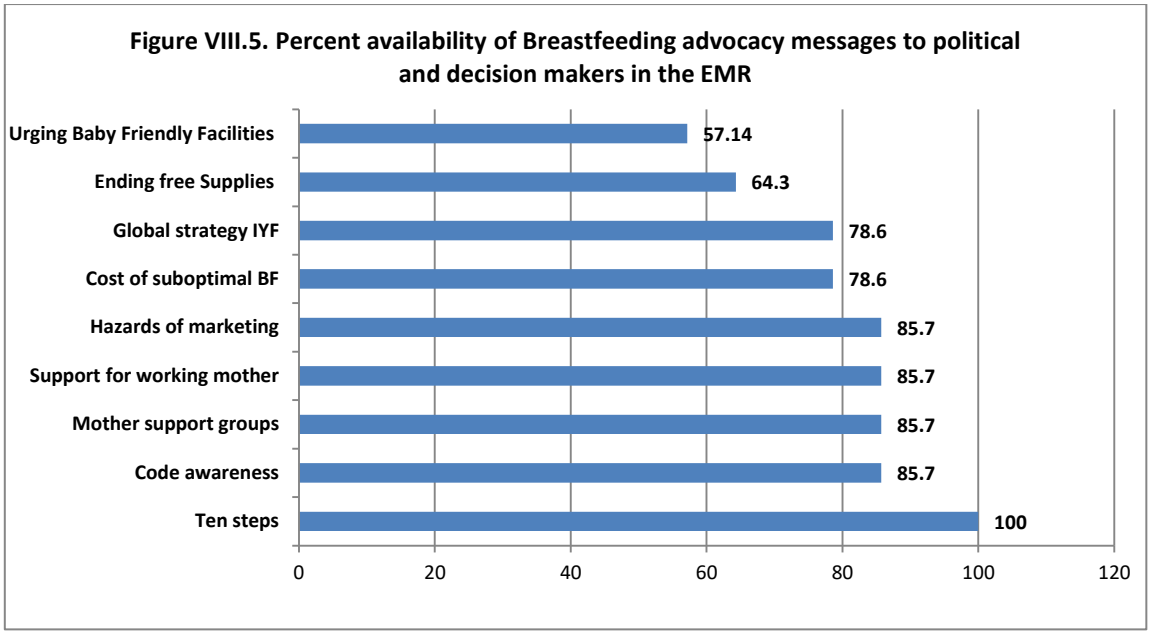
is prescribed formula and presents later with complications from the disease. This happens often with sepsis, anomalies in the heart or in the urinary tract or other serious diseases, that managed in the early stages of the disease can prevent long term handicap or death. Hence effective breastfeeding is a sensitive tool for assessing and remedying health of children early in life. In Lebanon, Pakistan, Syria and Sudan there was a need to integrate this information in formal educational messages.



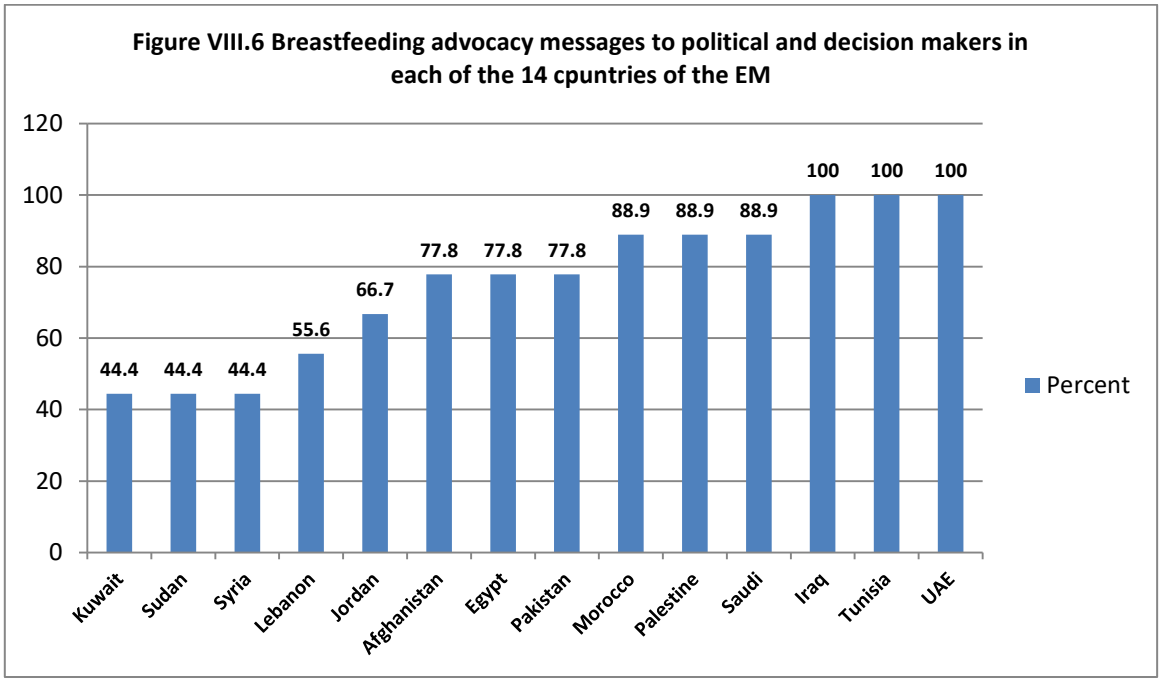
LAM: lactational amenorrhea method of contraception, LM: lactation management, LBW: low birth weight, CS: cesarean section, BF: breastfeeding



Breastfeeding promotion messages for advocacy purposes were highest for the Ten steps of the Baby-friendly Hospital Initiative (BFHI) (100%) and lowest for urging facilities to become Baby-friendly (57.1%). Messages related to Code awareness, supporting working mothers, mother support groups, hazards of marketing were available in 85.7% of the reporting countries. While messages covering the global strategy of infant and young child feeding and cost of suboptimal feeding were available in 78.6% of countries. Messages for ending free supplies of milk formula were available in 64.3% of countries.



IYCF: infant and young child feeding.



All countries shared in the annual breastfeeding national campaigns for the World Breastfeeding week. Over 70% of countries had printed matter and used radio and TV and social media to disseminate breastfeeding messages. Also messages were given on face-to-face basis during antenatal (ANC) and post natal care (PNC). Channels least used were hotlines, mobile apps, SMS, billboards, soap operas, songs, shows and other means of popular media entertainment.

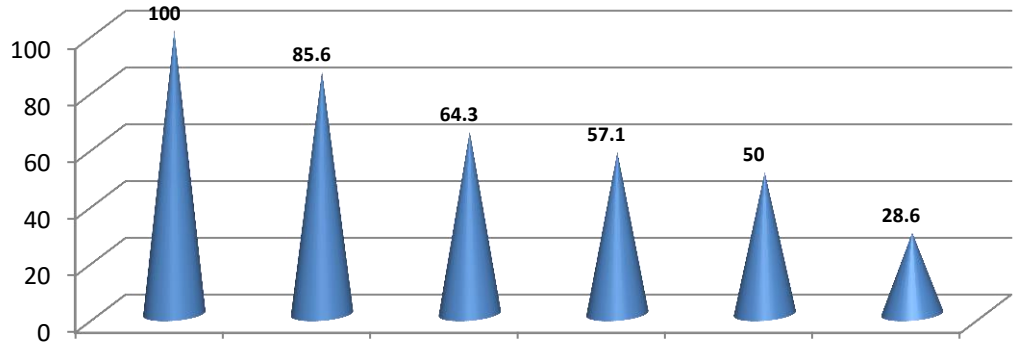
Printed matter is funded mostly by UN agencies and often by both government and UN agencies. They have the advantage of being easy to control, based on evidence and are subjected to testing to suit the needs of the audience. However they are quickly depleted and difficult to sustain. Social media play an important role and its role as one of the information technology tools is taking the lead. However they are difficult to monitor and control due to the lack of evidence and testing as well as the diversity

of sources. Other tools that require massive production costs and time and effort are the videos, TV soap operas and mobile applications. Hence they are less popular channels of communication. Mobile messages and hotlines require agencies that are dedicated for the purpose and are mainly done by NGOs.

Hence the availability of expert human resources, financial assistance, and accurate data are needed for encouraging successful breastfeeding campaigns. Carefully designed messages can be instrumental in making their dissemination through social media effective in changing practice. Monitoring and feedback are needed to strengthen the performance of these messages in changing behaviour. The public audience will disseminate the messages that is befitting to its culture, hence allowing individuality and tailoring messages to specific mother groups according to their needs and preferences, likes and dislikes and cultural background, is recommended for successful campaigns.

Companies and audiences working with them are using the stone and ripple effect to divert attention from breastfeeding. Typical examples include the stories of one baby who died when the baby was "starved" on the breast. Messages such as "baby could have been saved if one bottle feed was given" and "if it was not for the health staff/doctor that pressured her not to give the bottle" create panic and fear in the community. In Egypt the one time strike where a few mothers "demonstrated" at a health center because of "presumed infant formula shortage" backed up by a media campaign that lasted for one month, presumably initiated by one local paper and spreading through a ripple effect to all papers. Such incidents can be used as case studies of what can be used effectively on the social media. Babies are dying every day in hospitals because of being formula fed, yet we make no case of each of them and simply report them as data for statistics. It appears that incidents and cases that are personalized can be more effective than numbers and percentages and we may need to be more innovative in how we can be effective in the use of the emerging channels of communication.

Figure VIII.7. Sources of messages for breastfeeding promotion in the 14 EMR countries.



VIII.2 Effectiveness of Communication

Health communication is directed towards improving the health status of individuals and populations. Much of modern culture is transmitted by the mass and multimedia which has both positive and negative implications for health. Research shows that theory-driven

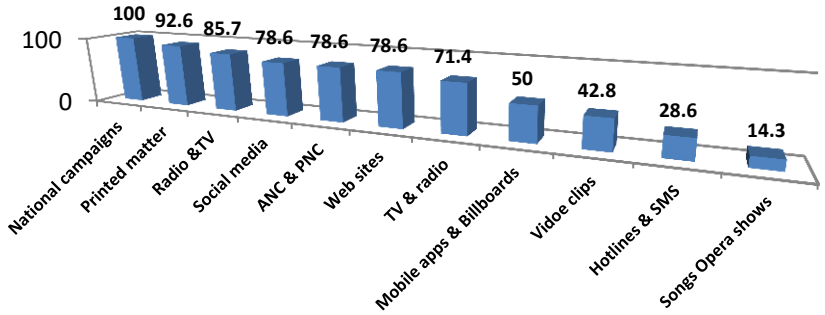
mediated health promotion programming can put health on the public agenda, reinforce health messages, stimulate people to seek further information, and in some instances, bring about sustained healthy lifestyles.

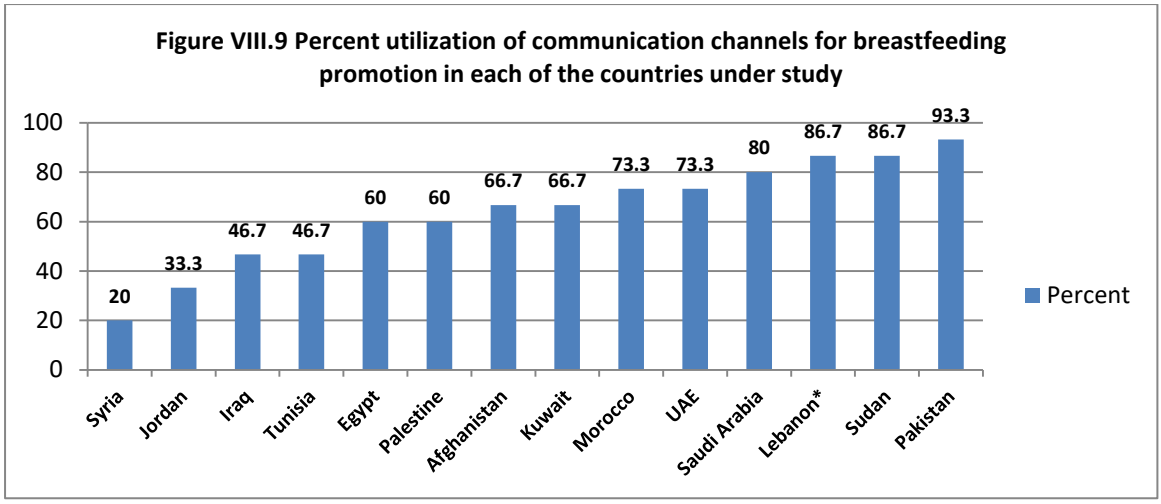
Health communication encompasses several areas including edutainment or enter-education, health journalism, interpersonal communication, media advocacy, organizational communication, risk communication, social communication and social marketing. It can take many forms from mass and multimedia communications to traditional and culture-specific communication such as storytelling, puppet shows and songs. It may take the form of discreet health messages or be incorporated into existing media for communication such as soap operas.

Advances in communication media, especially in the multimedia and new information technology continue to improve access to health information. In this respect, health communication becomes an increasingly important element to achieving greater supporting individuals and communities make optimum infant feeding decisions in feeding their child.

National campaigns as during the world breastfeeding week, which was a popular event used to intensify dissemination of these messages. The tools used for the dissemination of breastfeeding messages were mostly printed matter in 92.6% of the countries. Other popular dissemination channels included press and social media which were reported to be used to promote messages by 78.6% of the countries. Billboards were reported to be used by 50% of the countries. However, video clips and mobile applications were used by only 42.8% of the countries. The use of TV shows, soap operas, songs were rarely used (14.3%) as they are very costly and lack sustainability, as they are usually a one time show. But countries with governmental resources as GCC countries reported to use them. Also mobile messages and hotlines were less commonly used (28.6%) although these are not expensive.

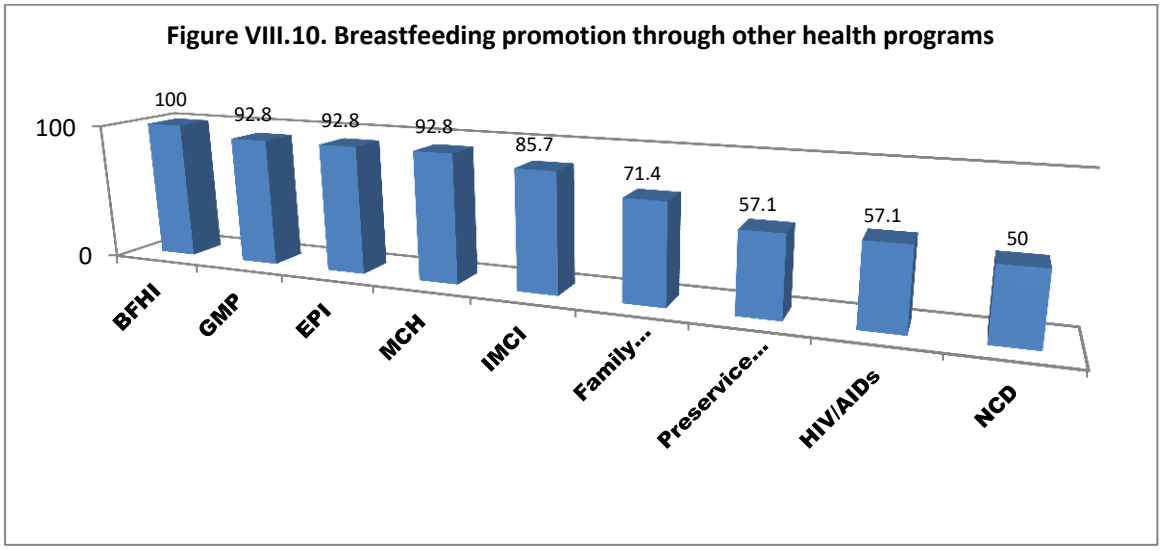
Figure VIII.8. Types of communication channels used for breastfeeding promotion in the EMR countries under study





Breastfeeding Promotion by Other National Programs:

The commonest programs that shared in breastfeeding promotion were maternal and child health (MCH), growth monitoring, (GMP) and neonatal care programs (92.8%), integrated management of childhood illness (IMCI) (85.7%) and family planning (FP) (71.4%). Programs that were less involved in breastfeeding promotion were the non-communicable diseases (NCDs) and HIV/AIDs programs and unfortunately the pre-service training. The latter is a very important program that should be involved in breastfeeding promotion as it can directly influence the success and sustainability of the program. NCDs can be very instrumental in influencing women and children as the greatest expenditure that can be saved by breastfeeding comes from preventing NCDs and handicapping conditions especially conditions such preventing cancer to Breastfeeding promotional messages both to the mothers and public as well as educational matter to professionals need to emphasize the important protective role breastfeeding has on preventing NCDs and the hazards of formula feeding and of marketing BMS on causing these diseases. Hence the need to revise our communication strategies in this regards

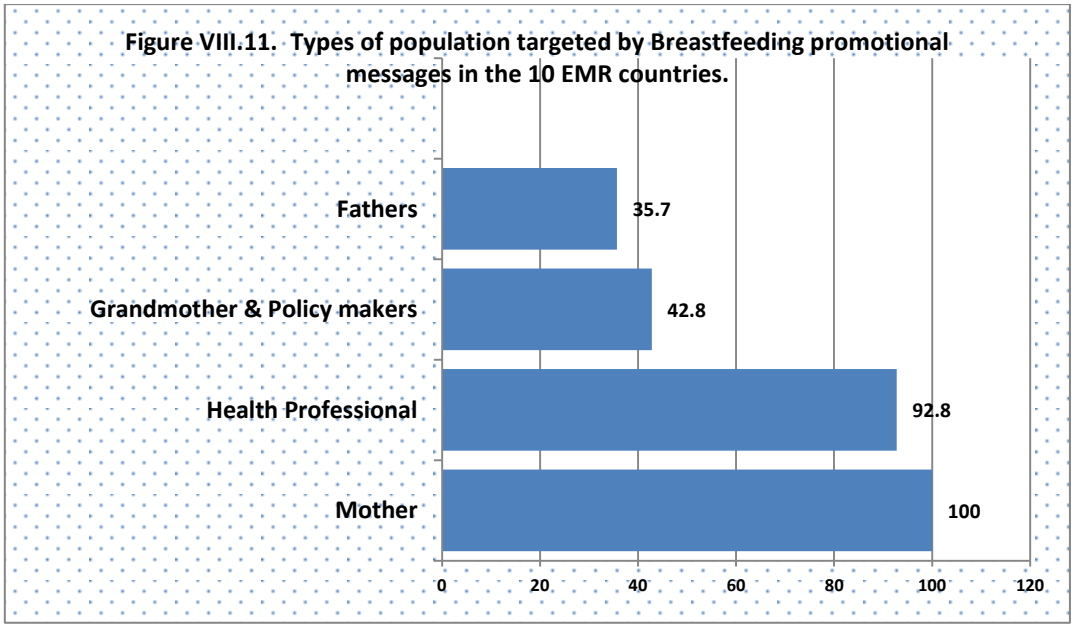


BFHI: Baby-friendly Hospital Initiative, GMP: growth monitoring program, EPI: expanded program of immunization, MCH: maternal and child health, IMCI: integrated management of childhood illness, NCD: non communicable diseases.

The populations targeted by Breastfeeding Messages

The countries reported that messages their main target was the mother. Messages to health professionals came next in order (92.8%). However their content, as shown in the analysis above was defective. Populations that need were not sufficiently targeted on more regular basis are family members especially the grandmothers (42.8%). Also policy makers were targeted in less than one half of the countries (42.8%). The least targeted were the fathers (35.7%). In Egypt and Iraq it was mentioned that community leaders and religious leaders are also targeted by Breastfeeding promotion messages.

Many studies have shown that targeting fathers can support breastfeeding continuity and decrease difficulties, as shown in the evidence below, although effectiveness of these interventions were poorly disseminated. Teaching fathers how to prevent and to manage the most common lactation difficulties is associated with higher rates of full breastfeeding at 6 months (***Pisacane et al., 2005, Sharma et al., 1997, Odom et al., 2014***).



VIII.3. Conclusions and recommendations

We conclude that many countries are making considerable efforts to produce Breastfeeding promotion messages. Many of the messages target mainly mothers few target her direct support or social network of family, friends, employers or others who may influence her decision or ability to continue to breastfeed. The messages are formulated and disseminated by the ministries of health of almost all the countries who participated in the survey and are printed by UN agencies. Contribution by other local governmental or non-governmental or international agencies are present but to a lesser extent.

There was an abundance of information covering special situations that present

difficulties to mothers and their babies, including misconception and medical conditions. However there is a high need for messages formulated to government agencies and influential groups that can affect the success of breastfeeding or interfere with it.

Channels for promotion are limited to printed matter. Other channels particularly those linked to the innovative and emerging technologies as social media, mobile phones messages, internet, web sites, applications on android and ipad ect.. are those that are highly used by the industry but are not reported to be used to high extent for promoting BFP messaged formulated by the governments.

Protective messages including those messages that counter the health claims of industry are needed. Labeling messages are poorly adhered to especially those included by the guidance released in 2016 for the inappropriate marketing of baby foods and beverages.

However the study showed that there is high commitment by the governments to work on widening its scope of dissemination and variety of channels and scope of market utilizing and targeted by breastfeeding promotion. Many countries have very well prepared documents and handouts for breastfeeding promotion and education.

VIII.4. Summary

Messages that covered benefits of breastfeeding for mothers and babies and exclusive breastfeeding were reported to be present by all countries (100%). Messages for promoting timely initiation, rooming-in, continued breastfeeding for two years were reported by 92.9% of countries. Messages for promoting on-demand (to the cue feeding) were reported by 85.7% of countries. Messages that prohibit offering bottles and teats were absent in two countries (14.3%). Messages for mother friendly were not present in 3 countries (21.4%).

Breastfeeding promotion messages targeting common problems in breastfeeding in both mother and baby ranged from 92.9% for not enough milk, to 42.9% for mothers with medical problems. The lack of messages in these conditions can explain the decrease in continuation despite the high initiation rates in most countries. Hence the importance of formulation of messages for these special groups of mothers having a medical problem or having a baby with a medical condition to encourage continuity of breastfeeding. These messages should address both mothers and health professionals.

Breastfeeding promotion messages for advocacy purposes were highest for policies covering the Ten steps of the Baby-friendly Hospital Initiative (BFHI) and lowest for urging facilities to become designated as Baby-friendly (57.1%). Messages related to ending free supplies were reported by 64.3% of countries. Code awareness, supporting working breastfeeding mothers, mother support groups and hazards of marketing were available in 85.7% of the surveyed countries. While messages

concerning, the global strategy of infant and young child feeding (GSIYCF) and the cost of suboptimal infant feeding were reported to be present in 78.6% of countries.

The sources of breastfeeding messages were mainly from Ministries of health (MoH) in collaborated or supported by united nation (UN) agencies as UNICEF as reported by 12 countries (85.7%). However nine countries (64.3%) also mentioned that it came from hospitals, 8 (57.1%) from ministry of media and non-governmental organizations (NGOs). While 28.6% of the countries reported that academic institutions also contributed to the formulation of these messages. The messages were supported by evidence based medicine in 85.7% of the countries and were reported to undergo testing by 57.1% of the countries.

The channels used for the promotion of the BFP messages were mostly printed matter in 92.6% of the countries and also through national campaigns (100%). Press and social media were also popular dissemination channels to promote messages in 78.6% of the countries. Billboards were used by 50% of the countries, while video clips and mobile application were used by only 42.8% of the countries. The use of TV shows, soap operas, songs were rarely used (14.3%), mostly by countries with governmental resources as GCC countries. Also mobile messages and hotlines were less commonly used (28.6%).

Promotion of communication messages for breastfeeding by national programs, other than the Baby-friendly Hospital Initiative, are reported to be was highest for growth monitoring programs, neonatal care programs and MCH (92.8%) followed by the Integrated management of childhood illness (IMCI) (85.7%) and family planning (71.4%). Other programs as noncommunicable diseases (NCD), HIV AIDS were less involved in breastfeeding messages (50% and 57% respectively). While the pre-service training included breastfeeding messages in only 57.1% of countries.

The population most often targeted by the messages produced by the country was the mother in 100% and health professional in 92.8%. Other influential groups that were less commonly targeted included the grandmother in 42.8% and the father in 35.7% of countries. The policy maker was also least targeted by the breastfeeding messages (42.8%).

Recommended Communication strategies that emerged from the study are summarized as follows:

Strategy #1: Promoting the protection and support of exclusive breastfeeding for the first six months of life and continued breastfeeding up to the completion of two years of age or more is a fundamental strategy for child health and survival.

Strategy #2: Supporting the continuity of breastfeeding support throughout pregnancy, birth and breastfeeding through the designation of Baby-friendly districts or communities (Health facility + community based).

Strategy #3: Developing communication messages that support the Ten Steps that form the basis of the Baby-friendly Hospital Initiative, reinforced by mother friendly practices, making mothers aware of marketing tactics by companies and professionals aware of the Code and sensitive to issues related to conflict of interest.

Strategy #4: Education in breastfeeding and lactation management needs to be integrated in undergraduate and postgraduate curricula in universities and formal education, pre-service and in-service training.

Strategy #5: Advocacy is an important tool for strengthening implementation, enforcing and sustaining change in practices. Advocacy messages need to stimulate health facilities to become Baby-friendly, implementing and monitoring the Code and the Global Strategy of infant and young child feeding including emergencies and protecting the rights of working breastfeeding women.

Strategy #6: Involving multidisciplinary teams from different professional bodies in the formulation of Breastfeeding messages to develop ownership and build on partnerships and prevent antagonist counter messages to emerge.

Strategy #7: Using a variety of channels for dissemination of breastfeeding messages which can allow for increasing the frequency and scope of dissemination and reaching various groups of mothers and influential groups.

Strategy #8: Strengthening coordination between health programs within the Ministry of Health and other ministries and governmental and nongovernmental organizations for disseminating consistent breastfeeding promotion messages and to allow for scaling up with breastfeeding promotion messages.

Strategy #9: Strengthening monitoring and evaluation of breastfeeding messages by developing consistent and unified input, process and output indicators for promotion, protection and support of breastfeeding and Baby-friendly Hospitals, which are continuously evaluated and updated.

Strategy #10: Formulating breastfeeding promotion messages that meet the needs of various groups and in a suitable language to meet the changing needs of mothers, their family members as fathers, grandmothers and health professionals.

Strategy #11: Identifying and targeting the sources of oppositional messages that can minimize the effects of breastfeeding educational awareness campaigns. Also, formulating counter messages, using counterpropaganda, in order to support mothers to continue breastfeeding and not to give in to those oppositional messages.

Strategy #12: Preparing educational material specifically targeting the gaps in the information that should reach the public and the mothers about products under the scope of the Code to support

legislation measures to make mothers, professionals and policy makers aware of the hazards of these products and the marketing tactics used to promote them.

Strategy #13: Strengthening the managerial components of the program including the planning, staffing, development of human resources, training, funding, coordination, information systems, monitoring and evaluation for program sustainability.

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المقال الثامن : تشجيع ودعم الرضاعة الطبيعية فى بلدان إقليم شرق المتوسط

الملخص العربى

تشجيع الرضاعة الطبيعية يحتاج إلى حملات توعية مستمرة لتغيير لتعريف الأم بأهمية الرضاعة الطبيعية وكيفية ممارستها بنجاح . وقد أدخلت معظم الدول برامج لتشجيع ودعم الرضاعة الطبيعية ولكن نظراً للظروف القاسية التى تمر بها معظم بلدان المنطقة فقد توقفت هذه البرامج ولهذا قام مكتب إقليم شرق المتوسط لمظمة الصحة العالمية بعمل دراسة عن وضع التوعية وتعزيز الرضاعة الطبيعية فى بلدان المنطقة. وقد شاركت 14 دولة في هذه الدراسة وهم : أفجانستان و مصر و العراق والأردن و الكويت ولبنان والمغرب و المملكة السعودية و السودان و سوريا و باكستان و دولة فلسطين و تونس و الإمارات العربية .

أوضحت الدراسة أن معظم البلدان تنشر رسائل توعية عن فوائد الرضاعة الطبيعية للأمهات والرضع والرضاعة الطبيعية المطلقة (100 ٪). كما أن 92.9 ٪ من البلدان لديها رسائل تشجيع وضع المولود على الثدي فور الولادة للبدء بالرضاعة الطبيعية ، وتشجيع عدم فصل الطفل عن أمه وملازمته معها ليلاً ونهاراً للرضاعة عند الطلب ، أى عند ظهور علامات أوايماءات للرغبة فى الرضاعة(85.7 ٪) ، واستمرار الرضاعة الطبيعية لمدة عامين. أما الرسائل التي تحظر تقديم الزجاجات والحلمات كانت غائبة في بلدين (14.3٪). و لم تكن هناك رسائل عن الممارسات الصديقة للأم في 3 دول (21.4٪).

أما الرسائل التي تستهدف المشكلات الشائعة في الرضاعة الطبيعية لكل من الأم والطفل فقد تناولت عدم كفاية اللبن في 92.9 ٪ ، وكان هناك تدني فى الرسائل الموجهة للأمهات اللاتي يعانين من مشاكل طبية (42.9٪). إن قلة الرسائل في هذه الظروف يمكن أن يفسر الانخفاض المستمر في أنماط الاستمرارية في الرضاعة الطبيعية.

كانت رسائل حماية ودعم الرضاعة الطبيعية الموجهه لمتخذى وصانعي القرار والاعلام ضئيلة ومن أهمها رسائل عن الممارسات التى يجب أن تلتزم بها المنشآت الصحية والتي تتضمن الخطوات العشر لمبادرة المستشفيات الصديقة للأطفال فى (57.1٪). كما تم الإبلاغ عن الرسائل المتعلقة بإنهاء الإمدادات المجانية من قبل 64.3٪ من البلدان. كما أن الرسائل الخاصة بالتوعية عن أهمية المدونة الدولية لمنع التسويق لبدائل لبن الأم لم تكن موجودة بالقدر الكافي . وأخيراً فإن الرسائل الخاصة بدعم الأمهات المرضعات العاملات ، ومجموعات دعم الأم ومخاطر التسويق لم تكن متاحة بالقدر الكافي في البلدان التي شملها الاستطلاع.

كانت مصادر رسائل التوعية عن الرضاعة الطبيعية أساسًا من وزارات الصحة بدعم من قبل وكالات الأمم المتحدة فى 12 دولة (85.7٪). ومع ذلك ، ذكرت 9 دول (64.3٪) أنها جاءت من المستشفيات ، و 8 (57.1٪) من وزارة الإعلام والمنظمات غير الحكومية. بينما أفاد 28.6٪ من الدول أن المؤسسات الأكاديمية ساهمت أيضًا في صياغة هذه الرسائل. كانت الرسائل مدعومة بالطب المبني على الأدلة في 85.7 ٪ من البلدان ، وتم الإبلاغ عن خضوعها للاختبار من قبل 57.1 ٪ من البلدان.

كانت معظم الآليات المستخدمة للترويج لرسائل تشجيع الرضاعة الطبيعية هي المطبوعات في 92.6 ٪ من البلدان من خلال الحملات الوطنية (100 ٪). كما كانت الصحافة ووسائل التواصل الاجتماعي قنوات نشر شعبية للترويج للرسائل في 78.6 ٪ من البلدان. تم استخدام اللوحات الإعلانية بنسبة 50 ٪ من البلدان ، في حين تم استخدام مقاطع الفيديو والتطبيقات المحمولة من قبل 42.8 ٪ فقط من البلدان. لم يكن استخدام البرامج التلفزيونية كالمسلسلات والأغاني شائعاً (14.3٪) ، ولكنها استخدمت في دول مجلس التعاون الخليجي. كما كانت رسائل الهاتف المحمول والخطوط الساخنة أقل استخدامًا (28.6٪).

ذُكر أن الترويج لرسائل التواصل الخاصة عن الرضاعة الطبيعية كان الأعلى في برامج متابعة النمو وبرامج رعاية الأطفال حديثي الولادة(92.8٪) متبوعة ببرنامج الرعاية المتكاملة لأمراض الطفولة (85.7٪) و كذلك تنظيم الأسرة (71.4٪). كانت البرامج الأخرى مثل الأمراض غير السارية وفيروس نقص المناعة البشرية المكتسب / الإيدز أقل مشاركة في رسائل تشجيع الرضاعة الطبيعية(50 ٪ و 57 ٪ على التوالي). بينما تضمن التدريب قبل الخدمة رسائل تشجيع الرضاعة الطبيعية في 57.1 ٪ فقط من البلدان.

كان الرسائل تستهدف الأم بنسبة 100٪ والعاملين الصحيين بنسبة 92.8٪. أما المجموعات الأخرى ذات التأثير كالجدة في (42.8٪) والأب في (35.7٪) فقد كانت ضئلة فى معظم بلدان المنطقة. كان صانع القرار أيضًا أقل استهدافًا من خلال هذه الرسائل(42.8٪).

الاستراتيجيات المقترحة لتعزيز التوعية في الرضاعة الطبيعية لتحسين تغذية الرضع وصغار الأطفال

الإستراتيجية رقم 1: يعتبر تعزيز حماية ودعم الرضاعة الطبيعية المطلقة في الأشهر الستة الأولى من حياة الطفل واستمرارها لعامين أو أكثر مع الأغذية المكملة المناسبة استراتيجية أساسية لصحة الطفل وبقائه.

الإستراتيجية رقم 2: ضمان استمرارية دعم الرضاعة الطبيعية من بداية فترة الحمل والولادة و طوال فترة الرضاعة الطبيعية من خلال ربط الخدمات العلاجية في المستشفيات بخدمات الرعاية الصحية والمجتمعية الأولية بالمجتمع المحيط لضمان التكامل الصحي والاجتماعي للأمهات والأطفال وأسرهن.

الإستراتيجية رقم 3: تطوير رسائل التواصل التي تدعم الخطوات العشر والتي تشكل أساس مبادرة المستشفيات الصديقة للطفل ، والتي تعززها الممارسات الصديقة للأم ، وتوعية الأمهات والعاملين الصحيين بأساليب التسويق من قبل الشركات المنتجة لبدائل لبن الأم التي قد تنقل رسائل تتنافي مع قيم دعم وتشجيع الأمهات على الاستمرار بالرضاعة الطبيعية المطلقة أو الاستمرار بها لعامين وذلك بالترويج لمنتجاتها على أنها مثيلة للبن الأم ولا يحذرون الأم أن ادخالها للطفل له أضرار على استمرار الرضاعة و على صحة الطفل.

الاستراتيجية رقم 4: يجب دمج التوعية في مجال الرضاعة الطبيعية وإدارة الرضاعة في مناهج التعليم الرسمي و التعليم الجامعي والدراسات المتخصصة وبالأخص بكليات الطب والتمريض والصيدلة والادارة الصحية و التربية والاخصائيين الاجتماعيين وتدريبات قبل الخدمة والتدريب أثناء الخدمة.

الإستراتيجية رقم 5: تحتاج الرسائل الموجهه إلى متخذي القرار إلى أن تحفز المرافق الصحية لتصبح صديقة للطفل ، ومراقبة تطبيق المدونة والاستراتيجية العالمية لتغذية الرضع والأطفال الصغار بما في ذلك حالات الطوارئ وحماية حقوق الأمهات العاملات في أطالة أجازة رعاية الطفل لعامين مع الاحتفاظ بحقوقها فى الأجر والترقيات و المميزات الأخرى كالرعاية الصحية والاجتماعية والتعليمية.

الاستراتيجية رقم 6: إشراك فرق متعددة التخصصات من مختلف الهيئات في صياغة رسائل الرضاعة الطبيعية لتطوير الملكية والبناء على الشراكات ومنع ظهور رسائل مضادة تتنافي مع الغرض من تشجيع ودعم وحماية الرضاعة الطبيعية وتكاملاً مع أهداف التنمية المستدامة .

الاستراتيجية رقم 7: استخدام مجموعة متنوعة من قنوات التواصل و الاعلام لنشر رسائل الرضاعة الطبيعية لزيادة تواتر ونطاق النشر والوصول إلى مجموعات مختلفة من الأمهات والجماعات المؤثرة عليها من الأهل والأقارب والأصحاب و أصحاب القرار و علماء الدين و المرشدين الصحيين و الاعلاميين والمجالس الشعبية والحقوقيين.

الاستراتيجية رقم 8: تعزيز التنسيق بين البرامج الصحية داخل وزارات الصحة والسكان وخارجها مع الهيئات الحكومية وغير الحكومية الأخرى والجمعيات الأهلية لنشر رسائل التوعية في الرضاعة الطبيعية بحيث تكون مطابقة ومتوافقة مع بعضها البعض وتسمح بزيادة واتساع نشر هذه الرسائل تطابقها مع رؤية الوزارة والدولة لأفضل صحة للأجيال المقبله.

الاستراتيجية رقم 9: تحديث مؤشرات التوعية في الرضاعة الطبيعية ومبادرة المستشفيات الصديقة للطفل ووضع آليات للتقييم المستمر لجودة الرسائل وطرق نشرها من خلال البحوث الميدانية والاجتماعية للتعرف على الرسائل والقنوات المؤثرة و قياس تأثيرها على مؤشرات الرضاعة الطبيعية من خلال نظم المعلومات الصحية والجودة الشاملة.

الإستراتيجية رقم 10: صياغة رسائل التوعية في الرضاعة الطبيعية التي تلبي احتياجات من مختلف الفئات وبلغة ورسومات مناسبة لتلبية الاحتياجات المتغيرة للأمهات ومستواهم العلمي والثقافي وأفراد أسرهم كأباء وجدات والعاملين في الصحة والتغذية.

الاستراتيجية رقم 11: تحديد واستهداف مصادر الرسائل المعارضة التي يمكن أن تقلل من آثار حملات التوعية بالرضاعة الطبيعية. أيضا ، صياغة رسائل مضادة ، وذلك باستخدام الدعاية المضادة ، من أجل دعم الأمهات على مواصلة الرضاعة الطبيعية وعدم الاستسلام لتلك الرسائل المعارضة.

الاستراتيجية رقم 12: إعداد المواد التعليمية التي تستهدف على وجه التحديد الثغرات الموجودة في المعلومات التي ينبغي أن تصل إلى الجمهور والأمهات بشأن المنتجات التي تدخل في

نطاق المدونة لدعم التدابير التشريعية لجعل الأمهات والمهنيين وواضعي السياسات على دراية بأخطار هذه المنتجات و أساليب التسويق المستخدمة للترويج لها.

الإستراتيجية رقم 13: تعزيز المكونات الإدارية لبرنامج تشجيع الرضاعة الطبيعية فى الدول المختلفة بما في ذلك وضع الخطط ، وتنمية الموارد البشرية ، والتدريب ، والتمويل ، والتنسيق مع البرامج الأخرى والمؤسسات التعليمية والجمعيات الأهلية ، ونظم المعلومات ، والرصد والتقييم لاستدامة البرنامج.

Declaration:

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Under the supervision and guidance of *Dr Ayoub A-Jawaldeh*, Regional Advisor for Nutrition in EMRO and Head of the Nutrition Unit.

The study was designed, analyzed and prepared by WHO consultants: *Professor Azza Abul-Fadl and Dr Ghada Sayed* (IBFAN Arab World coordinator).

The study was assisted by country nutrition focal points that are included as authors in this article:

Dr. *Mona Abdulrahman Alsumaie*, Director of the Community Nutrition Promotion Department, **Kuwait.**

Ms. ***ALbandri Abu Nyayan***, Ministry of Health, **Kingdom of Saudi Arabia**.

Dr. *Khawaja Masuood Ahmed*, National Coordinator, Nutrition & NFA, Ministry of National Health Services, Regulations & Coordination, **Pakistan.**

Ms. ***Amira M.A.Ali***, Nutrition specialist, WHO & FMoH, **Sudan.**

Dr. *Jalila ElAtti*, Head of the "Studies and Planning" Department National Institute of Nutrition and Food Technology, **and Dr**. ***Leila Alouane***, Head of Training & Information, National Institute of Nutrition and Food Technology, **Tunisia.**

Dr. *Esmat AlQassim*, Ministry of Health and Prevention, Head MCH Section, **United Arab Emirates (UAE).**

Ms. ***Wafaa Badawi***, Nutrition specialist, WHO & FMoH, **Sudan**.

Eng. ***Mousa Al-Halaika***, Director of Nutrition Department, MoH, **State of Palestine**.

Dr. ***Hanan Al-Najmi***, Head of Woman's Health, MoH, **Jordan.**

Ms. ***Hala Daoud***, Nutrition Department, MoH, **Syria.**

Dr. *Laila ElAmmari*, Head of nutrition department, Ministry of Health, **Morocco.**

Ms. ***Pamela Zgheib Mansour***, Head of mother child and school health unit, Ministry of Public Health, **Lebanon**.

Dr. ***Mohammad Zahir Rodwal***, IYCF technical manager, PND, MoPH, **Afghanistan**.

Dr. *Nahla Roushdi*, Director of PHC, MoHP, **Egypt.**

Dr. ***Hind Khalid Sabeeh***, In Charge of Nutrition Program Unit at Nutrition Research Institute, MoH**, Iraq**.

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