

Nurturing the first

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1000 DAYS



A Nutrition Study in Belize

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INTRODUCTION

UNICEF's mission is to advocate for the protection of children's rights, to help meet their basic needs, and to expand their opportunities to reach their full potential. There are many ways to achieve this mission. Reducing the child mortality rate and increasing their health are impactful ways to expand children's opportunities in life. This can be accomplished through measures like breastfeeding promotion, stunting prevention, improved hygiene and access to clean water, and quality nutrition.

There is a wealth of evidence available which highlights the importance of breastfeeding for children's early development, as well as the interrelations between breastfeeding, health, stunting, complementary feeding, maternal nutrition, mental health, and economic status. Among the many proven benefits of breastfeeding, which includes its role as a child's first immunization, is its impact on reducing child morbidity and mortality, while also increasing growth, health, and intellectual development. It also reduces the likelihood of children being underweight and overweight, as well as stunting, obesity, and other health-related issues. In contrast, breastmilk substitutes, despite being heavily and sometimes aggressively marketed, cannot offer the same advantages; they are harder to digest, costlier, and pose greater hygiene risks. Breastfeeding creates a stronger bond between mother and child and reduces the mother's susceptibility to breast cancer, ovarian cancer and cardiovascular diseases. Society benefits from breastfeeding through reduced healthcare costs for the treatment of illnesses and mortality expenses.

Stunting poses great costs to children affected and the society at large, as it perpetuates generational cycles of poverty and reduced human capital. Therefore, the prevention of stunting is a national priority. The recommended approach to addressing this issue involves exclusive breastfeeding immediately after birth for the first six months, followed by the introduction of complementary foods while breastfeeding for up to two years. Complementary feeding practices should gradually incorporate greater food consistency, variety and quantity. To attain minimum dietary diversity and adequate nutrition, children should consume food from at least four out of the established eight food groups daily.

Given concerns about breastfeeding rates and the nutritional status of children in Belize, the Ministry of Health and Wellness (MoHW), together with UNICEF Belize, are working to improve the situation further. The MoHW has recently revised the Belize National Breastfeeding Policy from 1997 to include updated information in light of new evidence and improvements in breastfeeding support facilities. The International Code for the Marketing of Breast Milk Substitutes, developed in 1981 to end of inappropriate promotion of foods for infants and young children, is currently being considered for legal implementation in Belize (as a law or legal guideline). In 2006, the Baby Friendly Hospital Initiative (BFHI) was piloted in Belize and is now the country's most important public health intervention targeting breastfeeding. Accreditation as "Baby Friendly" is granted by WHO/UNICEF to hospitals after they have implemented the institutional and procedural changes necessary to meet

criteria. A Baby Friendly Hospital is a healthcare facility where the WHO/UNICEF "Ten Steps to Successful Breastfeeding" serve as the standard for maternal and children's care, as its aim is to effectively protect, promote, and support exclusive breastfeeding from birth. In Belize, all public hospitals nationwide are participating in this initiative as participation is required to receive certification.

STUNTING

The reference population used in this report is based on the WHO growth standards. Height-for-age is a measure of linear growth. Children (under 5yrs) whose height-for-age is more than two standard deviations below the median of the reference population are considered short for their age and are classified as moderately or severely stunted. Those whose height-for-age is more than three standard deviations below the median are classified as severely stunted. Stunting is a reflection of chronic malnutrition as a result of failure to receive adequate nutrition over a long period and recurrent or chronic

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OBJECTIVES

The aim of the first study is to analyze breastfeeding and complementary feeding practices using data from the last three Multiple Indicator Cluster Studies (MICS). The second study aims to identify important barriers and other influencing factors towards breastfeeding, and evaluate the influence of the BFHI on breastfeeding. The research questions for the studies are as follows:

1 RESEARCH QUESTIONS FOR STUDY 1:

- 1) What are the characteristics of the levels and inequalities of key indicators for exclusive breastfeeding, continued breastfeeding, complementary feeding practices, and stunting?
- 2) What are the characteristics of macro-level trends in these outcomes from **MICS 3** to **MICS 5**?
- 3) Which factors are associated with changes in these outcomes over time?

2 RESEARCH QUESTIONS FOR STUDY 2:

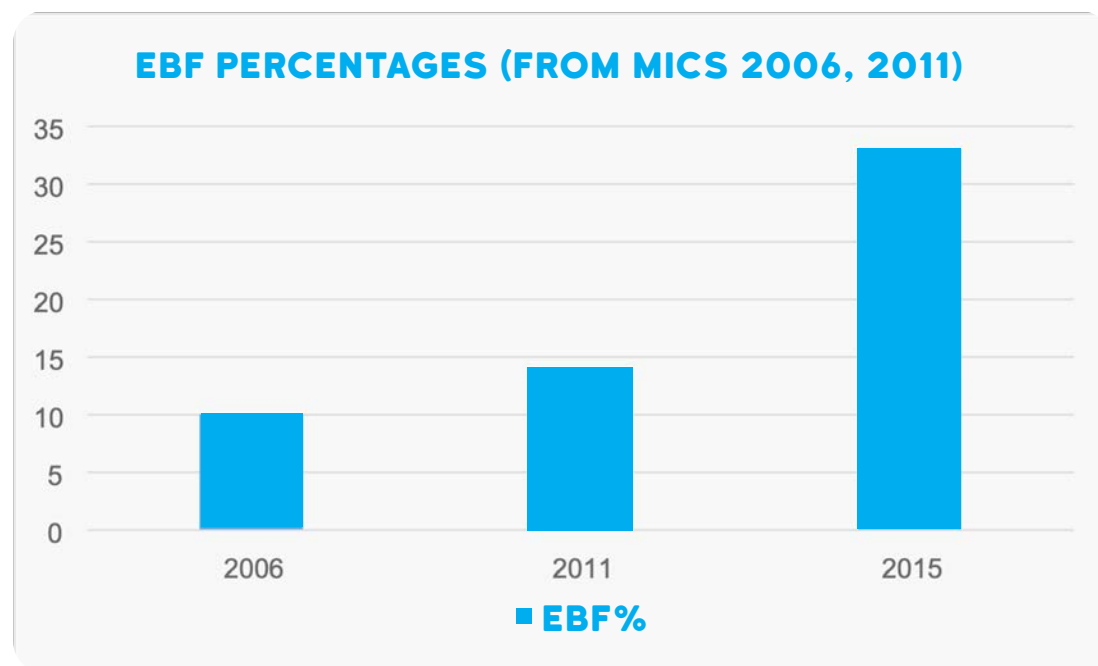
- 1) What are the practices and the motives of women to breastfeed a child?
- 2) What are the motivating and inhibiting factors for breastfeeding at three stages:
 - a) Early initiation of breastfeeding **within 1 hour of birth**;
 - b) Exclusive breastfeeding **during 6 months**;
 - c) Continuation of breastfeeding **up to 2 or more years**.
- 3) To what extent do women recognize breastfeeding interventions or the **BFHI**?
- 4) How feasible are mobile health interventions in promoting breastfeeding?

METHODOLOGY

The results of **STUDY 1** are based on statistical analysis of **MICS data from 2006, 2011 and 2015-2016**. The results of **STUDY 2** are based on a **desk review and qualitative data collected in Belize**. Face-to-face interviews were conducted with 38 caregivers (mainly women) of children under two years of age. Key Informant Interviews were also conducted, primarily in person, with some completed online. Group Discussions were held with mothers, healthcare personnel and other caregivers.

FINDINGS

STUDY 1 RQ1: What are the characteristics of the levels and inequalities of key indicators for exclusive breastfeeding, continued breastfeeding, complementary feeding practices, and stunting?	STUDY 1 RQ2: What are the characteristics of macro-level trends in these outcomes from MICS 3 to MICS 5?
<p>The findings reveal notable achievements in the increased prevalence of exclusive breastfeeding (EBF) over the years. However, in 2015-2016, two out of three children were still not exclusively breastfed for the first six months, with EBF rates at 33%.</p>	<p>Secondly, although gender differences for EBF were identified in 2006, with girls being more exclusively breastfed than boys during the first six months, these inequalities have been decreasing over time. Furthermore, socioeconomic factors such as wealth, education and geographical location significantly influence EBF practices.</p> <p>Mothers with lower education levels are more likely to exclusively breastfeed their babies compared to mothers with higher education levels. There is a tendency for wealthier families to practice EBF less often than poorer families. In rural areas, mothers tend to practice EBF more often during the first six months compared to mothers residing in urban areas.</p>



Based on the findings of **STUDY 1**, approximately 80% of children aged 6-8 months received complementary feeding in 2015. This has doubled since 2006. It highlights an improvement in the timing of introducing complementary feeding, which aligns with UNICEF recommendations to introduce complementary feeding at 6 months old. The prevalence of continued breastfeeding (BF) and complementary feeding practices is higher in rural areas than urban areas. Approximately 60% of children aged 6-24 months were engaged in these practices in rural areas in 2015. Notably, from the highest prevalence of stunting was observed in Toledo. On average, every second child in Toledo has experienced stunting over the years (MICS, from 2006 to 2015-16). Although stunting prevalence decreased in 2015-2016 compared to data from the two previous MICS assessments, the rate remains at 15%.

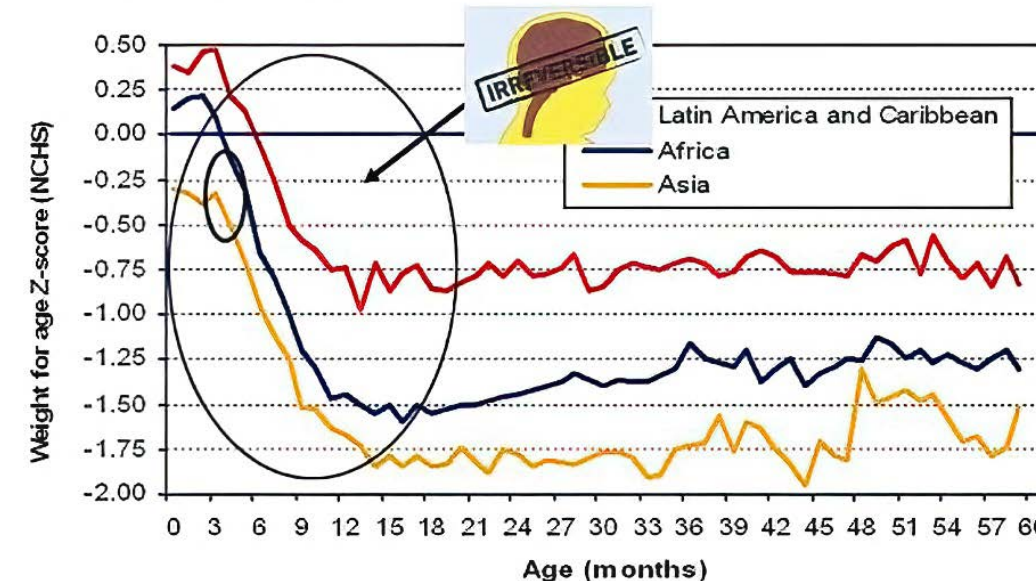


One in every 2 children is stunted in Toledo.

The national stunting rate is 15%.

The stunting rate for Toledo is extremely high at 33%.

The “Window of Opportunity” for improving nutrition is very small...pre-pregnancy until 18-24 months of age



Repositioning Nutrition, 2006

In conclusion, the findings from **STUDY 1** suggest that while the prevalence of exclusive breastfeeding (EBF), breastfeeding (BF), and complementary feeding practices tend to be higher in rural areas, and among poorer and less educated mothers, stunting prevalence is higher among these vulnerable groups.

New Ranges: Stunting

Outline | Background | Rational for revision | **New Ranges** | Targeting | Programmatic Actions | Discussion

Previous Prevalence Thresholds		Revised prevalence Threshold	
Prevalence Threshold (%)	Label	Prevalence (%)	Label
N/A	N/A	<2.5	Very Low
< 20	Low	2.5 - <10	Low
20-29	Medium	10 - <20	Medium
30-39	High	20 - <30	High
≥ 40	Very High	≥ 30	Very High

- Descriptive, based on observed quartiles of stunting prevalence from 79 national LMIC surveys (lowest range <20% labelled as “Low”).
- “public health significance” terminology not justified as not based on functional outcomes.
- Labels not aligned with wasting
- Multiplied “normal/very low” prevalence of 2.5% by 4, 8 and 12 to establish ranges; as functional outcomes were preferred, by doubling the X factor used for wasting, considered function somewhat in lower impact of stunting on mortality and concomitant higher X factor.
- Labels aligned with wasting and overweight

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STUDY 1 RQ3: Which factors are associated with changes in these outcomes overtime?

The results suggest that geographic location is a significant predictor of exclusive breastfeeding (EBF) because mothers in urban areas breastfeed less than mothers in rural areas. The difference in EBF between rural and urban areas shows a trend to increase over the years. Secondly, the difference in EBF by baby's gender shows a trend to decrease over time and is not significant in 2011 and 2015-2016. These observations align with the findings for **RQ1** and **RQ2**.

Boys are twice as unlikely to be exclusively breastfed than girls.

Geographic location (rural/urban) and underweight status were significant predictors of stunting in 2006. Children residing in rural areas and those classified as being underweight were more likely to be stunted compared to children living in urban areas and who were not underweight. In 2011, the statistical analysis identified lower maternal education, poverty, lower BMI, and underweight status as significant predictors of stunting. However, BMI was not a significant predictor in 2015-2016, and its significance is expected to decrease over time. In 2015-2016, both geographic location (rural/urban) and EBF emerged as significant predictors

of stunting. However, BMI was not a significant predictor in 2015-2016, and its significance is expected to decrease over time. In 2015-2016, both geographic location (rural/urban) and EBF emerged as significant predictors of stunting. This suggests that children residing in rural areas and those who were not exclusively breastfed were more likely to be stunted, compared to children from urban areas and those who were exclusively breastfed for the first 6 months. This alignment with UNICEF and WHO recommendations highlights the preventative role of EBF against stunting.

Furthermore, the outcomes of Study 1 indicate significant shifts in EBF (increase) and stunting (decrease) rates over the years. A statistically significant relationship between EBF and stunting was found in 2015, indicating that

Previous Prevalence Thresholds		Revised prevalence Thresholds	
Prevalence Threshold (%)	Label	Prevalence (%)	Label
N/A	N/A	<2.5	Very Low
<20	Low	2.5 - <10	Low
20-29	Medium	10 - <20	Medium
30-39	High	20 - <30	High
≥40	Very High	≥30	Very High

• Descriptive, based on observed quantiles of stunting prevalence from 79 national LMIC surveys (lowest range <2.5% labelled as 'Low').
 • 'Public health significance' terminology not justified as not based on functional outcomes.
 • Labels not aligned with wasting.
 • Multiplied 'normal/very low' prevalence of 2.5% by 4, 8 and 22 to establish ranges, as functional outcomes were preferred, by doubling the 'X' factor used for wasting, considered function somewhat in lower impact of stunting on mortality and concomitant higher 'X' factor.
 • Labels aligned with wasting and overweight.



a higher incidence of exclusive breastfeeding corresponds with a lower prevalence of stunting. The increase in child weight also played a pivotal role in this shift over time and has contributed to a decline in stunting. The prevalence of underweight children, especially in rural areas, should be a warning for potential stunting. Stunting is more likely to appear in rural areas due to factors such as lower income, greater distances between communities and health facilities, and limited access to diverse nutrition compared to urban areas. Maternal education and wealth are also associated with stunting, with lower education and lower wealth leading to higher rates of stunting.

However, findings for **RQ1** and **RQ2** suggest that stunting persists in rural areas and among vulnerable groups

even though these groups have higher rates of EBF, breastfeeding and complementary feeding practices. This indicates that other factors are contributing to the prevalence of stunting in rural

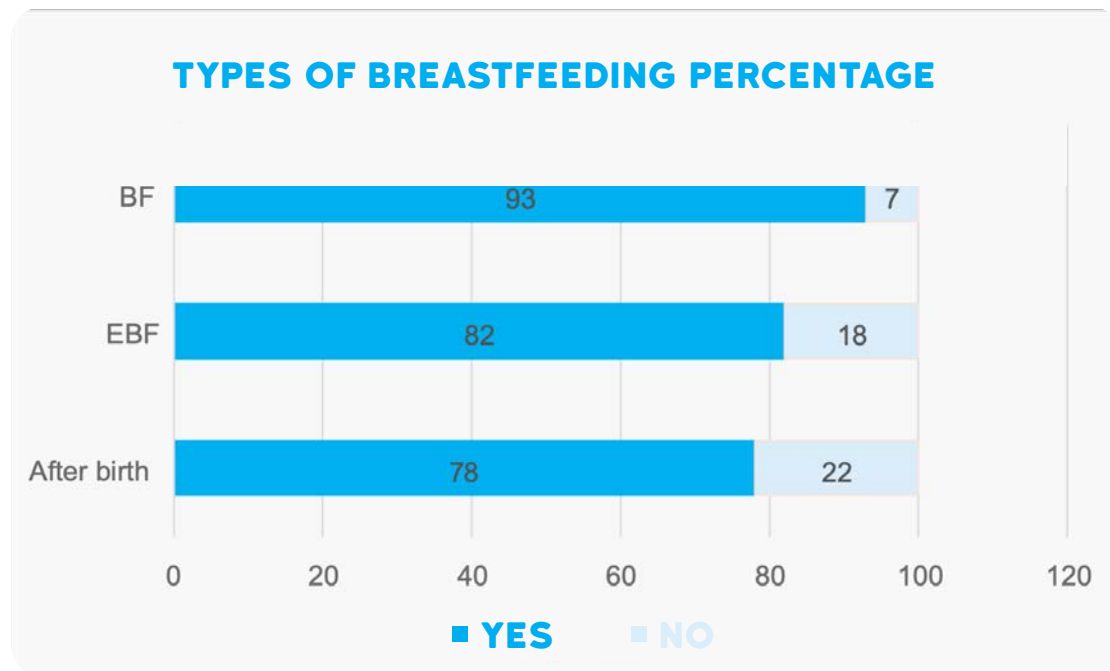
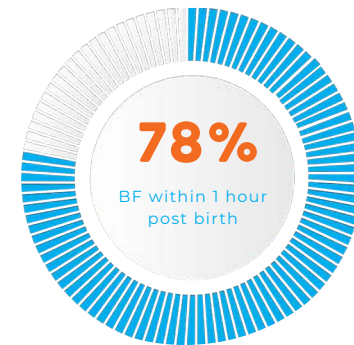
areas, and an investigation into factors other than breastfeeding is required. Previous research suggests that the Water, Sanitation and Hygiene (WASH) situation is likely to be worse in rural areas than in urban areas due to the limited availability of varied nutrition, difficulty in accessing healthcare, increased associated costs (e.g., transport and time), and potential exposure to shared spaces animals, all of which contribute to further health risks. In addition, maternal nutritional status, in terms of the quantity, quality and variety of her diet, strongly influences the child during pregnancy and lactation, as well as through complementary feeding choices.

To conclude, geographic location emerges as a dominant factor over the time, not only for stunting but also for EBF. An investigation into factors other than EBF and complementary feeding practices should be conducted to discover why children are more likely to be stunted in rural areas as compared to urban areas, even if the prevalence of EBF and complementary feeding practices is higher in rural areas. The findings from **STUDY 1** are important to UNICEF for several reasons. **First**, they highlight significant changes in EBF (increase) and stunting (decrease) over the years among mothers of Belize. **Secondly**, the findings suggest that behavior change interventions aiming to decrease stunting should target vulnerable groups, such as mothers who are poorer, less educated, and

live in rural areas. **Thirdly**, the results suggest the importance of investigating further potential contextual and psychosocial factors that are influencing target behaviors.

STUDY 2 RQ1: What are the practices and the motives of women to breastfeed a child?

Of the 33 mothers interviewed in the qualitative **STUDY 2**, 93% practiced some form of breastfeeding. This includes exclusive, non-exclusive and complementary breastfeeding. 82% mentioned practicing exclusive breastfeeding during the first six months of the child's life, and 78% stated that they breastfed within one hour after birth. This means that general breastfeeding is more prevalent than exclusive breastfeeding, and both of these practices are more common than breastfeeding right after birth.



The baby's gender and the number of children living in the household were hypothesized to have an influence on the amount of breastfeeding practiced, which is why these variables were examined in greater detail. When directly questioned, most individuals did not think the baby's gender had an impact on breastfeeding practices. A few suggestions were made regarding the origin of this perceived influence, such as the belief that boys need more milk and are generally rougher in nature, whereas girls motivate more protective feelings.

STUDY 2 also found that the presence of more children in the household can have both positive and negative effects on breastfeeding. Positive feelings about breastfeeding arise when mothers receive support from older siblings and if they had good prior experiences with breastfeeding older siblings. Negative feelings can stem from increased stress and reduced available time due to the demands of caring for more children. Likewise, prior negative experiences with breastfeeding older siblings could also hinder current practices.

The motivation to breastfeed primarily comes from the belief that breastfed babies are healthier, have a stronger immune system, develop more antibodies, experience fewer illnesses,

and are less prone to obesity. Improved infant development also stands out as a significant motivation to breastfeed. Breastfed babies are thought to exhibit enhanced growth and improved digestion, coupled with the perception of being more plump, beautiful, active, responsive, and intelligent. The advantages of breast milk extend beyond its health benefits, as it is perceived to be gentler on the baby's stomach, more convenient, comfortable, natural, soothing, and nutritious, thus inducing a sense of calmness in babies. From an economic standpoint, breastfeeding is deemed as being more cost effective than its alternatives. It also strengthens the loving bond between mother and



child. Furthermore, it is recognized for its maternal health benefits such as the prevention of cancer, hypertension, infections, and depression. It aids in reducing postpartum bleeding and uterine contractions, and it supports healthy weight loss and body figure recovery.

STUDY 2 RQ2: What are the motivating and inhibiting factors for breastfeeding at three stages:

(i) Early initiation of breastfeeding 1 hour after birth

Factors influencing breastfeeding initiation within the first hour after birth are often found within hospital settings. Supportive nurses, who give clear instructions when necessary, play a critical role in determining whether a mother engages in breastfeeding immediately after birth. The key is to provide information about the benefits of breastfeeding and offer solutions

to common issues like latching, positioning, breast milk production and breast care. The availability of informative pamphlets and posters at hospitals and during doctor's visits also influences early initiation practices. The Baby-Friendly Hospital Initiative (BFHI) has played a pivotal role in increasing breastfeeding rates through measures such as staff training, policy implementation, and targeted hospital activities. This is vital because all public hospitals are part of the BFHI, and the public health system reaches the majority of mothers who give birth in Belize.

Exclusive Breastfeeding: Means feeding your baby only breast milk, not any other foods or liquids (including infant formula or water), except for medications or vitamin and mineral supplements.

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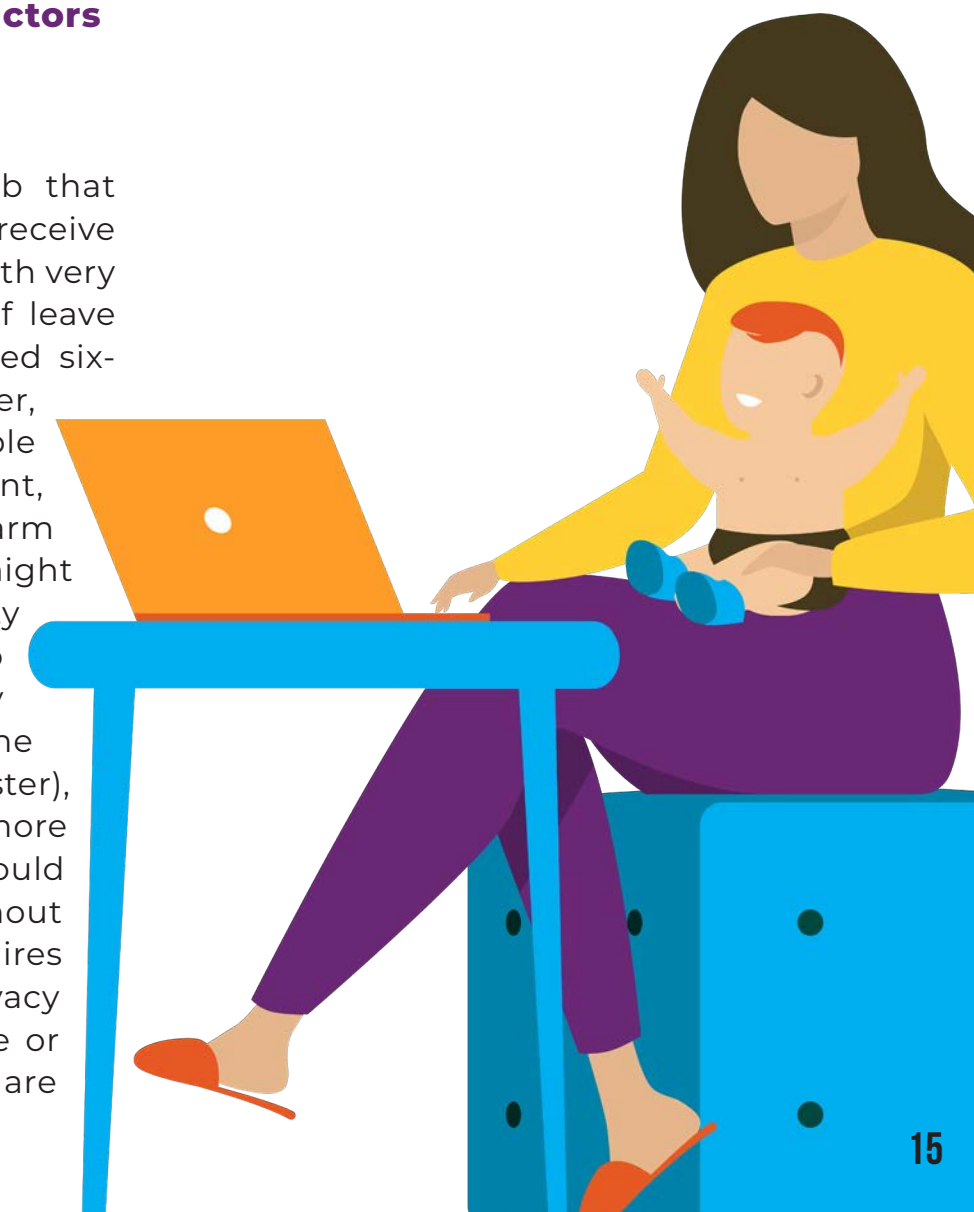
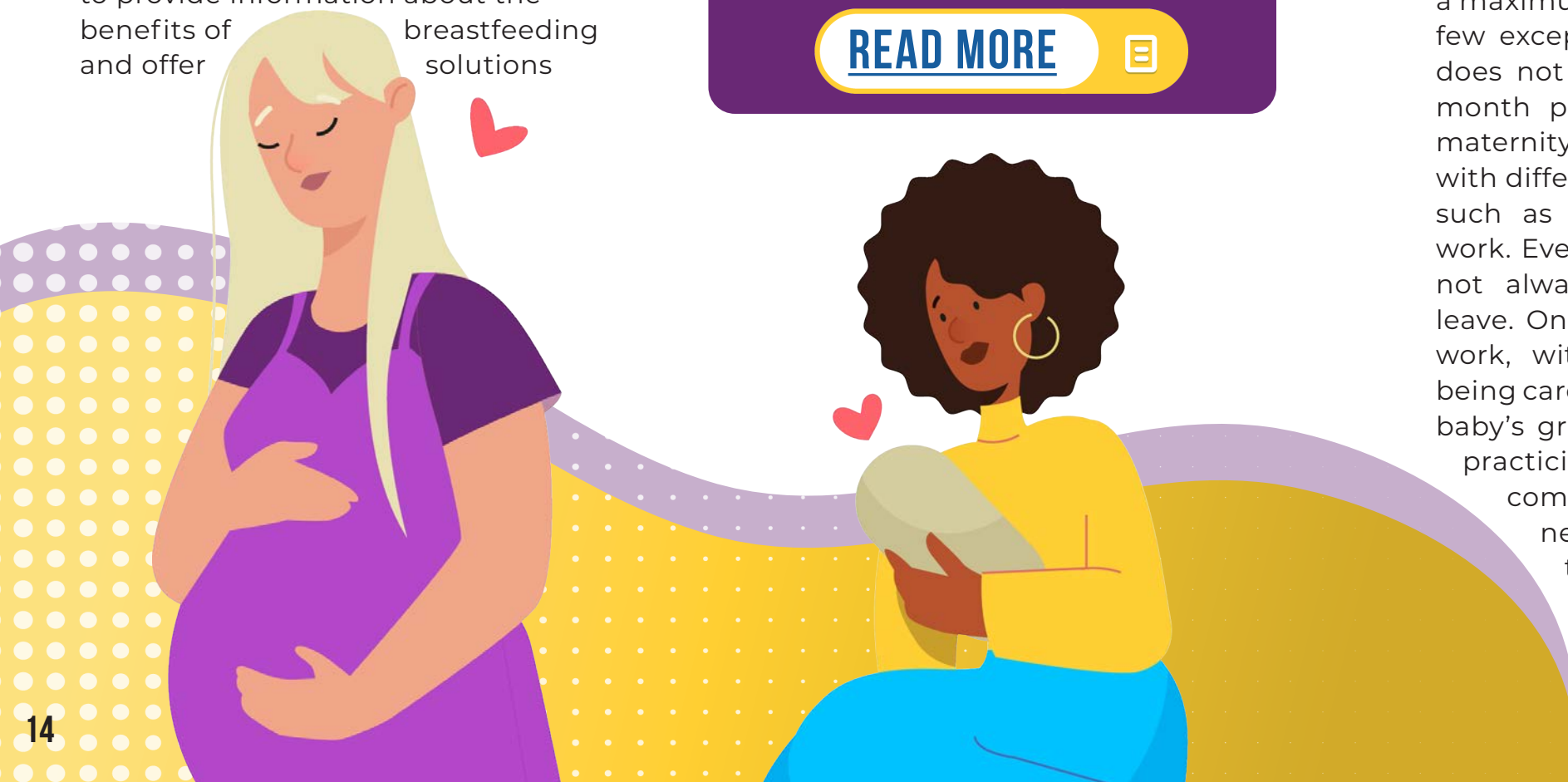
(ii) Exclusive breastfeeding during 6 months

The key factors that motivate mothers to practice exclusive breastfeeding (EBF) closely mirror those for breastfeeding in general. These include enhanced infant health, improved development, the belief that breast milk is better and more cost-effective, among others. Mothers who perceive not practicing EBF as less severe, connecting it less to fear-based reasons, practice EBF for a longer duration on average. Also, older mothers tend to exclusively breastfeed longer.

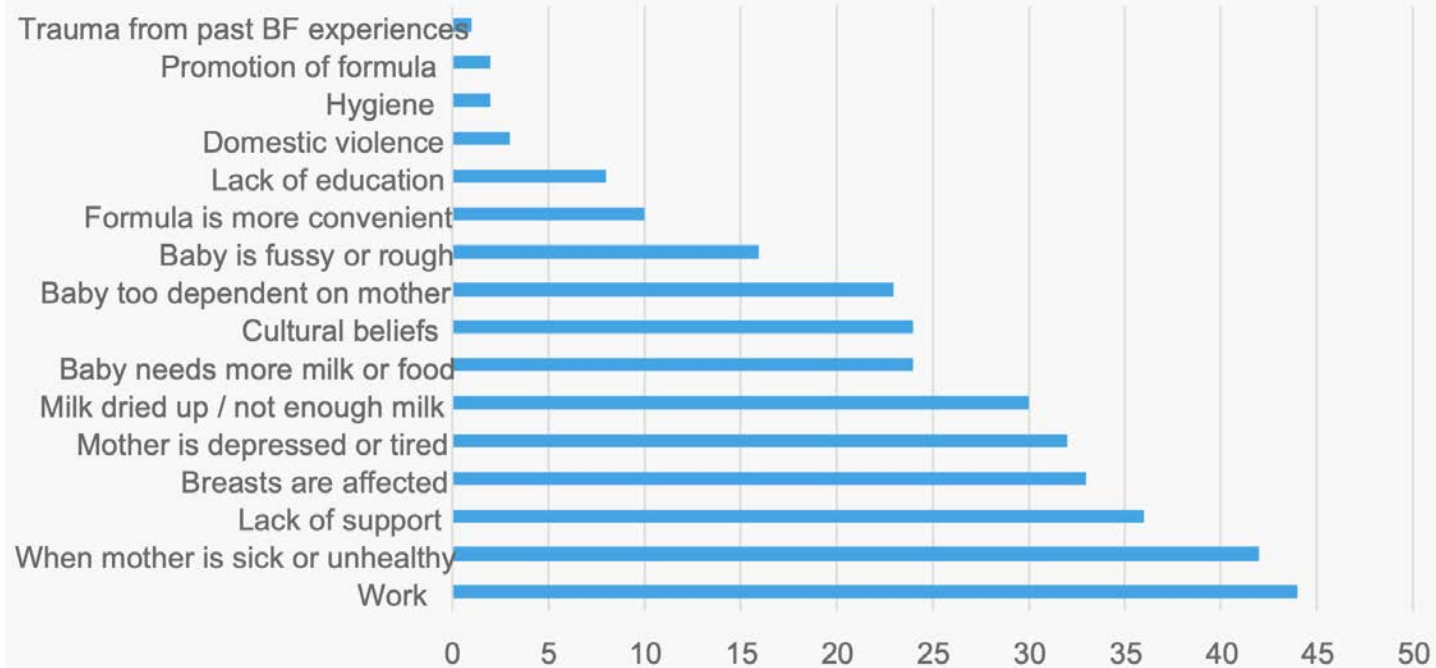
Employment was identified as one of the strongest inhibiting factors to exclusive breastfeeding in STUDY 2.

Even when mothers have a job that grants maternity leave, they only receive a maximum of 3 months leave, with very few exceptions. Three months of leave does not cover the recommended six-month period for EBF. Moreover, maternity leave is not always possible with different types of employment, such as self-employment or farm work. Even employed mothers might not always receive a maternity leave. Once mothers are back to work, with a 3-month-old baby being cared for by a relative (like the baby's grandmother, aunt, or sister), practicing EBF becomes more complicated. Mothers would need to pump throughout the day, which requires space, time and privacy that is rarely available or possible. Workplaces are

also requires planning and effort, which can overwhelm mothers who are already stressed. Caring for an infant can be emotionally and physically draining, and, for some mothers, this is compounded by the demands of a full workday and likely disrupted sleep at night. Opting for bottle feeding to gain a little extra freedom and allowing the child to be cared for by someone else are understandable solutions to these problems.



BREASTFEEDING DISADVANTAGES & BARRIERS



Illness is another inhibiting factor which can prevent a mother from EBF.

For example, medical advice about HIV and breastfeeding is inconclusive. In some cases, mothers might be afraid to pass on an illness, even when it is not contagious, as in the case of one interviewee who stated that she did not want to pass on her diabetes. Her fear persisted even though she was informed that breastfeeding actually protects infants from diabetes. Other illnesses, which require surgeries or strong medication, can actually interrupt breastfeeding.

Lack of support from a partner, the family or even society can inhibit mothers from breastfeeding.

When a close individual or perceived

societal opinion favors bottle-feeding over breastfeeding, or when a mother becomes overwhelmed with her numerous responsibilities, bottle-feeding presents itself as a solution. Public breastfeeding can lead to stigma, with mothers being perceived as indecent. Advertisements presenting breastmilk substitutes and bottle-feeding as cleaner, easier, and healthier can be the last push needed to stop breastfeeding or discourage its consideration altogether.

Additional barriers are that women believe they can be negatively affected by breastfeeding. For instance, many women feel that breastfeeding negatively affects their breasts, and they might develop infections or blisters, encounter rough nursing habits from the baby, or experience discomfort, sagging, drooping, and leaking (aesthetic concerns).

The mother’s mental health can also act as a barrier to breastfeeding, especially if she is experiencing depression (such as postpartum depression), stress, exhaustion, or frustration (due to sleep deprivation and challenging nights). The perception of having to share her body can also create resistance. Physical factors such as excessive weight loss or finding breastfeeding to be demanding on the body can further contribute to these barriers. It was also mentioned during interviews that breastfeeding requires patience, time, and effort.

Lastly, certain technical challenges can also inhibit the practice of breastfeeding. Some mothers encounter difficulties in producing sufficient milk or perceive their milk supply as inadequate or dried up, often due to the baby appearing hungry after feeding. As such, breast milk substitutes can be perceived as more satiating. Insufficient knowledge about methods to boost milk production can exacerbate these hurdles, potentially leading mothers to discontinue breastfeeding.

To address these challenges, priority must be given to the following suggested areas to increase breastfeeding practices. These

include the need to establish more supportive workplaces that offer designated times and private spaces for pumping or breastfeeding. Moreover, stronger support for mothers in general and for their mental health, from partners, families, society, and the public health system, is crucial in order to increase the promotion of breastfeeding, social acceptance and awareness, the availability of trained professionals.



(iii) Continuation of breastfeeding to 2 or more years.

Unless faced with one of the aforementioned barriers, mothers who practice EBF often continue to breastfeed once complementary food is given. However, not all caregivers are aware that a baby should start receiving complementary feeding at six months old. In addition, some people believe in certain myths surrounding continued breastfeeding, like that the quality of breastmilk decreases with time and that boys should not be breastfed for longer than one year.

There are some concerns surrounding complementary feeding. From the eight food groups recommended by the WHO, food groups 1 (grains, roots, and tubers) and 6 (vitamin-A rich fruits and vegetables) were the most commonly named for complementary feeding. The other food groups were rarely mentioned, which indicates that the food given to babies is not diverse enough. Other than those food groups, babies are also commonly fed breastmilk substitutes and adult food, which can be problematic. Nonetheless, caregivers are aware of the importance of good nutrition for a baby's growth, naming it first place, next to breastfeeding, love and attention, good care, hygiene, and medical care. Likewise, insufficient nutrition is the most commonly identified reason for stunting, next to inadequate care, poverty, and maternal self-neglect. Key informants mentioned the following issues with complementary feeding: bad infant food choices (e.g., junk food), negative

food and delayed commencement of complementary feeding.

Complementary Feeding: Starting at six months, breastfeeding should be combined with safe and age-appropriate feeding of solid, semi-solid, and soft foods.

According to WHO, ensuring that infants nutritional needs are met requires that complementary foods be:

timely – meaning that they are introduced when the need for energy and nutrients exceeds what can be provided through exclusive breastfeeding;

adequate – meaning that they provide sufficient energy, protein and micronutrients to meet a growing child's nutritional needs;

safe – meaning that they are hygienically stored and prepared, and fed with clean hands using clean utensils and not bottles and teats;

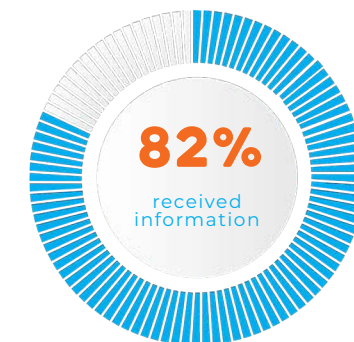
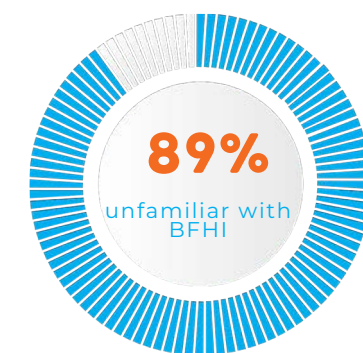
properly fed – meaning that they are given consistent with a child's signals of appetite and satiety, and that meal frequency and feeding are suitable for age.

food and delayed commencement of complementary feeding.

Mothers who perceive not breastfeeding as less severe, connecting it less to fear-based reasons, breastfeed longer (more months) on average. Also, the older a mother is, the longer she tends to breastfeed. Those who can identify barriers to breastfeeding practice, tend to breastfeed less on average. Mothers often experience the following issues with breastfeeding and need support. These include positioning of the baby, latching, holding the breast correctly, stimulating milk production, and protecting and caring for nipples and breasts during lactation. The most identified barriers to breastfeeding were employment, physical and health concerns, breastfeeding issues (e.g., not having enough milk, not being able to breastfeed or a baby still hungry after breastfeeding) and lack of support. Important sources of information about breastfeeding normally come from female family members (mothers, grandmothers, sisters), nurses, healthcare facilities, media (books, internet, social media) and education.

STUDY 2 RQ3: To which extent do women recognize breastfeeding interventions of the BFHI?

Of all respondents, 89% were unfamiliar with the Baby-Friendly Hospital Initiative (BFHI); however, after an explanation, 82% confirmed having received information this way. While the name and origin of the Initiative may be unfamiliar to participants in the study, its consequential impact holds greater significance. There is no doubt about the impact of the BFHI, as recipients of BFHI information



(mothers and caregivers) express their endorsement and affirm its instrumental role in shaping their behaviors. Participants also described the initiative as informative, behavior-shaping, beneficial, comprehensive in instruction, helpful, well-explained, significant, and valuable. The improvement in rates in terms of breastfeeding and stunting confirm this fact. The respondents also confirmed that nurses provide practical knowledge, information, and instructions and, to a lesser extent, promote breastfeeding. Key informants were all familiar with the BFHI and had very positive opinions about it.

STUDY 2 RQ4: How feasible are mobile health interventions to promote breastfeeding?

At present, breastfeeding is promoted primarily by the BFHI and public hospitals. This means that the responsibility of information dissemination and

and breastfeeding promotion mainly falls on nurses. Although the majority of women seem to attend public hospitals to give birth, transport to and from hospitals can present great difficulties in terms of cost, time, and effort, especially for women from rural and poorer communities. Fortunately, the Health Education and Community Participation Bureau (HECOPAB), mobile clinics, and community health workers have built a strong healthcare network in communities. Thus, these kinds of mobile health interventions can be a good complement, which can target communities that experience greater difficulties in regularly accessing healthcare services at hospitals or outside their immediate communities. Apart from nurses, posters and pamphlets at hospitals and clinics, mothers reported receiving breastfeeding-related information mainly from family and friends or social media. These are additional channels which could be used to disseminate information to hard-to-reach communities.

RECOMMENDATIONS

Promotion and behavior change:

- Behavior change interventions to reduce stunting should target vulnerable groups, including mothers who are poorer, less educated, and live in rural areas. Collect quantitative data on desired behaviors and investigate potential contextual and psychosocial factors influencing target behaviors to plan systematic behavior change.
- Utilize the same arguments from Study 2 (infant health benefits, development, cost-effectiveness, bonding, maternal health) when promoting breastfeeding.
- Focus more on the promotion of breastfeeding and behavior change campaigning, rather than just providing information. Address additional behavioral factors like attitudes, emotions, norms, abilities, and planning to increase the impact. Staff should be trained on these campaigning and promotion techniques.
- Increase the quality of complementary feeding through more education on stunting, nutrition, and better maternal nutrition during pregnancy, lactation, and complementary feeding.
- Increase the availability and diversity of food through community gardens, cooking groups, community worker trainings, and systematic behavior change.
- Involve the help of experienced mothers and grandmothers in communities.
- Utilize social media as well as the educational system to disseminate information about breastfeeding and diverse nutrition.

Future analysis:

- Focus stunting checks and education on rural areas, poorer communities, and among mothers with lower education levels, using underweight status as a warning indicator.
- Analyze WASH-related behaviors, and if they are found to be relevant, employ behavior change techniques to increase healthy behaviors and reduce stunting.
- Include an indicator about out-of-the-house / livelihood workload or maternal employment into the next MICS.

BFHI and mobile health interventions:

- If increased visibility and recognition of the BFHI is desired, unify the used design and create a logo which can then be used by all participating hospitals and on all information materials, including pamphlets, posters, and social media posts.
- Expand mobile health interventions through community health workers and HECOPAB events.
- Address various topics through community health workers, including breastfeeding promotion, breastfeeding and employment integration, diversifying nutrition, and supporting mental health.
- Establish support groups in communities, such as cooking groups, breastfeeding groups with experienced mothers, and mental health support groups.

Training and education:

- Provide doctors with training to offer breastfeeding and pumping information, even for sick mothers. Tailor breastfeeding and complementary feeding information for each developmental stage during doctor's visits.
- Train health staff to support mothers, detect mental health problems, provide "first aid" for mental health, and guide mothers to seek help.
- Address breastfeeding myths by including misinformation management into breastfeeding communication.
- Include topics of responsible family planning, birth control, gender equality, sex education, infant care, and breastfeeding into an early school curriculum, to reach girls and boys before they drop out of school.

Women empowerment and support:

- Increase support for mothers to enable them to face barriers and ensure they do not feel forced to breastfeed or prohibited to bottle-feed. Use positive messages and avoid negative argumentation.
- Offer solutions to common breastfeeding concerns (e.g., milk production problems, positioning, latching, baby is not full after feeding, infections, blisters, illness, etc.) to new mothers through communication materials and respective staff training.
- Make information about mental health support available to mothers and all healthcare staff.

Upscaling:

- Expand BFHI to the private sector and ensure "The Code" and the "Ten Steps" are also implemented.
- Learn from and collaborate with countries with high rates of breastfeeding among working mothers. Share insights from Belize's work and from this study.

Advocacy:

- Increase public awareness about breastfeeding and include an appeal to the public, especially men and fathers, on how to support breastfeeding mothers.
- Empower working mothers by:
 - advocating for more supportive work environments and laws or policies which support working breastfeeding mothers.
 - giving information about pumping and storing.
 - encouraging them to speak up about their needs and rights.
- Encourage men's involvement in infant care and promote shared childcare responsibilities.
- Advocate for destigmatizing breastfeeding in public, and provide private spaces for breastfeeding and pumping at work and in public places.
- Advocate for the right to breastfeed at work, in terms of time and space needed, as well as for longer protected maternity leave of six months.
- Raise awareness about and advocate publicly for women empowerment, gender equality, gender roles and their connection to breastfeeding and infant care.

Breastfeeding is connected to much more than meets the eye at first glance. Above and beyond health, development, and economic aspects, it extends to mental health and well-being, human rights, gender equality and societal well-being as a whole. Thus, while addressing breastfeeding, these linked factors and topics should be considered and advocated for as well.

For the complete background information, including materials, references, results tables, etc., please see the full report: Palacios, S.M., Gamma, A.E., Slekiene, J. (2023). Final report: Nutrition study Belize. Project report available at UNICEF Belize and the Ministry of Health and Wellness,

Glossary

Stunting: The reference population used in this report is based on the WHO growth standards. Height-for-age is a measure of linear growth. Children (under 5yrs) whose height-for-age is more than two standard deviations below the median of the reference population are considered short for their age and are classified as moderately or severely stunted. Those whose height-for-age is more than three standard deviations below the median are classified as severely stunted. Stunting is a reflection of chronic malnutrition as a result of failure to receive adequate nutrition over a long period and recurrent or chronic illness.

<https://www.who.int/news/item/19-11-2015-stunting-in-a-nutshell>

Executive Breastfeeding: Means feeding your baby only breast milk, not any other foods or liquids (including infant formula or water), except for medications or vitamin and mineral supplements. (Center for Disease Control and Prevention)

Complementary Feeding: Starting at six months, breastfeeding should be combined with safe and age-appropriate feeding of solid, semi-solid, and soft foods. According to WHO, ensuring that infants nutritional needs are met requires that complementary foods be:

timely – meaning that they are introduced when the need for energy and nutrients exceeds what can be provided through exclusive breastfeeding;

adequate – meaning that they provide sufficient energy, protein and micronutrients to meet a growing child’s nutritional needs;

safe – meaning that they are hygienically stored and prepared, and fed with clean hands using clean utensils and not bottles and teats;

properly fed – meaning that they are given consistent with a child’s signals of appetite and satiety, and that meal frequency and feeding are suitable for age.

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November 2023

