

THE ABRAHAM HORWITZ LECTURE

Breastfeeding: from Biology to Policy

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INTRODUCTION

I feel privileged and honoured to be here today to talk on such an important topic as breastfeeding. I am here not as an expert but as a woman, mother and a health worker in a non-industrialised country. Some may well question why breastfeeding should merit this attention when it is the simple and natural way of feeding our young. However, it is this very simplistic view of breastfeeding that may cause some to take it for granted and to consider breastfeeding promotion a waste of resources ‘*since women breastfeed anyway*’. Yet, statistics indicate that most mothers do not practice optimal breastfeeding¹ and exclusive breastfeeding - defined by WHO as giving no other food or liquids including water to the infant for up to 6 months of age - is a rare practice. It is estimated that almost 1.5 million infant lives could be saved per year if exclusive breastfeeding was practiced for the first 6 months (UNICEF, 1997a).

International commitment to the protection, promotion and support of breastfeeding

Breastfeeding promotion has come a long way over the decades, and this is mostly due to the high profile it has been given through international-level commitment². In reference to the dangers of artificial feeding, Dr Cecily Williams spoke of ‘Milk and Murder’ as far back as 1939. La Leche League formed the first organized breastfeeding group in 1957, which has since grown to over 40,000 members. During the 1970s, attention was focused on breastfeeding through campaigns, including lawsuits to stop the aggressive promotion of infant formula to the detriment of breastfeeding.

¹ This is defined as exclusive breastfeeding from birth to about 6 months of age. Thereafter, children should continue to be breastfed while receiving appropriate and adequate complementary foods for up to 2 years of age or beyond.

² See AHRTAG Resource List: Breastfeeding Information Resources, published by Appropriate Health Resources and Technologies Action Group (AHRTAG), London UK.

The International Baby Food Action Network (IBFAN) was founded in 1979 - the same year that WHO and UNICEF hosted an international meeting on infant and young child feeding. The meeting called for the development of an International Code of Marketing of Breastmilk Substitutes, which was later adopted at the World Health Assembly in 1981. There have been various World Health Assembly resolutions thereafter on infant and young child feeding.

The Convention on the Rights of the Child was adopted in 1989 and came into legal force in 1990. It referred to 'all segments of society, in particular parents and children being informed, having access to education and being supported in the use of basic knowledge of child health and nutrition, and the advantages of breastfeeding...'

The Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding was developed and adopted in 1990 (UNICEF, 1990). It set specific goals for all governments to be achieved by the year 1995, as well as soliciting the support of international organisations. The Declaration called for the integration of breastfeeding policies into the overall health and development plans of governments. It also emphasised the need to increase women's confidence in their ability to breastfeed, which should involve the removal of barriers to optimal breastfeeding. This Declaration was adopted by 32 governments and 10 UN Agencies.

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Individuals and organisations dedicated to the protection, promotion and support of breastfeeding formed an umbrella network – World Alliance for Breastfeeding Action (WABA) in 1991. During this same year, UNICEF/WHO launched the global Baby Friendly Hospital Initiative aimed at creating breastfeeding friendly environments at health facilities. The International Conference on Nutrition (ICN) in 1992, showed tremendous commitment to breastfeeding by incorporating it in most of its themes as well as in the World Declaration and Plan of Action for Nutrition.

THE BIOLOGY OF BREASTFEEDING

It has been a popular belief that breastfeeding benefits mostly non-industrialized countries because breastmilk is a clean, 'cheap' food in light of inadequate resources and poor sanitary conditions. Today we know differently as research continues to show its benefits for both industrialised and non-industrialised countries (Cunningham et al., 1992).

In discussing the health benefits of breastfeeding, the emphasis is usually on the infant. Breastfeeding however, is not a private matter between the breasts and the infant as can be misconstrued from pictures of infants feeding from 'faceless' breasts. Breastfeeding is a process that involves two individuals: the mother or the 'breastfeeder' as the producer, and the infant as the consumer. The process benefits both the producer and the consumer and this is very important to highlight in breastfeeding promotion programmes. It is also crucial for the breastfeeding mother to know this.

Future research might yet discover further benefits of breastfeeding for both a mother and her infant. It is time for women to recognize the importance, the uniqueness and value of their breasts. Maybe it is also time for women to start insuring these extremely valuable assets – their breasts!

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GLOBAL PATTERNS

Despite documented evidence of its benefits, global estimates indicate that 85% of mothers do not conform to optimal breastfeeding practices (see Obermeyer and Castle, 1997). Exclusive breastfeeding is still rare in a number of countries (Labbok et al., 1997). Estimates from the WHO Global Data Bank (1996) indicate that only 35% of infants have been exclusively breastfed for some duration during the first four months of life (see table). These alarmingly low figures on exclusive breastfeeding are, however, usually hidden under high initiation rates and long duration of breastfeeding as in the example from the African region where the median breastfeeding duration is 21 months.

Exclusive breastfeeding and median duration of breastfeeding: a global and regional overview, 1996

<i>WHO Region</i>	<i>Total number of infants (millions)</i>	<i>Total number of countries</i>	<i>Number of countries in the Region included (%)^a</i>	<i>Percentage of Infants in the Region included^b</i>	<i>Exclusive breastfeeding rate <4 months of age (%)^c</i>	<i>Median duration of breastfeeding (months)</i>
Africa	23.3	46	25 (54)	71	19	21
The Americas	16.0	35	14 (40)	38	34	10
South-East Asia	42.2	10	5 (50)	93	49	25
Europe	11.5	50	4 (8)	19	16	11
Eastern Mediterranean	15.5	22	11 (50)	84	36	19
Western Pacific	28.7	27	2 (7)	7	33	14
World total	137.2	190	61 (32)	58	35	18

^a Countries for which nationally representative data are available.

^b Percentage of children less than one year of age by region for which nationally representative data are available.

^c Percentage of infants under four months of age whose sole source of nourishment is breastmilk the day before the interview.

Source: WHO Global Data Bank on Breastfeeding

Breastfeeding: benefits for the mother

- ◇ Breastfeeding helps the uterus to return more quickly to its original size and thus minimises postpartum bleeding (Chua et al., 1994). This reduces the risk of anaemia for the breastfeeding mother and may contribute to a reduction in maternal mortality.
- ◇ Breastfeeding reduces the risk of premenopausal breast cancer (Newcomb et al., 1994) and ovarian cancer (Rosenblatt and Thomas, 1993).
- ◇ Breastfeeding is associated with improved bone remineralisation (Melton et al., 1993).
- ◇ Breastfeeding causes mothers to return more quickly to their pre-pregnancy weight (Dewey et al., 1993).
- ◇ Breastfeeding has child spacing benefits and prevents more births in Africa and many parts of Asia than contraception (Thapa et al., 1988). The Bellagio Consensus Conference in Italy in 1988 agreed that the Lactational Amenorrhoea Method (LAM) gives about 98% protection from pregnancy during the first 6 months after delivery if the mother is fully or nearly fully breastfeeding, and remains amenorrhoeic during that period (Consensus Statement, Lancet, 1988). The efficacy of LAM was demonstrated in a clinical case control intervention study (Perez et al., 1992). The contribution to child spacing of the traditional practice of sexual abstinence during the breastfeeding period (see Obermyer and Castle, 1997), still practised today (Davies-Adetugbo, 1997), should not be underestimated.
- ◇ Breastfeeding has emotional and psychological benefits, which are very important elements of maternal and child health (Akré, 1989). Examples of these are the satisfaction and the confidence of the mother in her capability to nurture her infant in the best possible way. This also includes the emotional bonding between the breastfeeding mother and her infant.

The full benefits of breastfeeding may however not be realized if optimal breastfeeding, including exclusive breastfeeding, is not practiced.

Breastfeeding: benefits for the infant

- ◇ Breastfeeding reduces the severity and incidence of diarrhoea during the first year (Dewey et al., 1995; Howie et al., 1990; Popkin et al., 1990; Victora et al., 1989) which is one of the major causes of mortality among infants and young children in developing countries.
- ◇ Breastfeeding reduces the risk of lower respiratory infections (Wright et al., 1989), otitis media (Anniansson et al., 1994; Duncan et al., 1993), atopic disease (Chandra, 1997; Lucas et al., 1990; Saarinen and Kajosaari, 1995) and necrotising enterocolitis (Lucas and Cole, 1990).
- ◇ Breastfeeding may protect against insulin-dependent diabetes mellitus (Mayer et al., 1988; Virtainen et al., 1993) and urinary tract infections (Piscane et al., 1992).
- ◇ Breastfeeding may protect infants from the sudden infant death syndrome (Ford et al., 1993) as well as from chronic digestive diseases (Greco et al., 1988), Crohn's disease and ulcerative colitis (Koletzko et al., 1989; Whorwell et al., 1979) and lymphoma (Davis et al., 1988; Shu et al., 1995).
- ◇ Breastfeeding improves the infant's neurological development (Lanting et al., 1994; Lucas et al., 1992).
- ◇ Breastfeeding may reduce the risk of bacterial meningitis (Istre et al., 1985) and bacteremia (Cochi et al., 1986). Breastfeeding stimulates the infant's immune system (Pabst et al., 1997).
- ◇ Breastfeeding may reduce the risk of heart disease in later life (Routi et al., 1995).
- ◇ Breastfed infants show a better response to vaccines (Pabst, 1997) while being protected against hay fever and asthma for up to 17 years (Saarinen and Kajosaari, 1995).

BARRIERS TO OPTIMAL BREASTFEEDING

The fact that exclusive breastfeeding is practiced by a minority of women may be attributed to a number of factors. Among these are cultural, social, economic and political factors.

Cultural factors may be crucial when promoting exclusive breastfeeding everywhere, but are particularly crucial in traditional rural communities. Local perceptions of what constitutes optimal infant feeding practices may differ greatly from international recommendations. Globally, prelacteal feeding is a common practice which includes giving the infant various liquids as well as water, prior to initiation of breastfeeding (Morse et al., 1990) and continuing throughout the duration of the breastfeeding period.

Davies-Adetugbo (1997), in a recent study on socio-cultural factors and the promotion of exclusive breastfeeding in rural communities, concluded that exclusive breastfeeding totally lacked credibility among the locals, with even health workers not believing that it was possible or feasible. Therefore promotion of optimal breastfeeding practices, including exclusive breastfeeding, cannot be successful if the cultural barrier is not adequately addressed.

Exclusive breastfeeding for up to six months requires the mother and her infant to be in close proximity for this period and to use expressed breastmilk for separation of short duration. However, practicing exclusive breastfeeding may be perceived as being non-compatible with working outside of the home, thus creating an economical barrier. This includes mothers working both in the formal and informal sector.

This notion may be viewed from two angles. Firstly, from that of the employer, including governments, who may wrongly perceive that the provision of adequate maternity leave, breastfeeding breaks and crèches at the work place would result in losses rather than profits. Secondly, from that of the mother, who may believe that practicing exclusive breastfeeding would limit the time she has for other activities – especially income generating activities.

A sick infant results in a worried mother, which in turn may result in a less productive mother. Absenteeism from work due to a sick infant may have more economical consequences than adequate maternity protection measures for optimal breastfeeding.

The lack of social support systems at the household and community levels is also a barrier to optimal breastfeeding. Mothers require an enabling environment if they are to practice optimal breastfeeding and this can only be possible with full support at both the household and the community levels. The issues to be addressed include the workload of the pregnant and lactating woman, among others.

National policies on breastfeeding are important for the promotion and support of breastfeeding at all levels. The lack of political commitment to breastfeeding promotion and support may probably be due to ignorance of its many benefits for the individual (mother and infant), household, community and the nation. Governments have still to understand the health, social and economic benefits of breastfeeding.

In light of all the barriers outlined above, how can we successfully get mothers to practice optimal breastfeeding including exclusive breastfeeding?

BREAKING THE BARRIERS WITH THE BABY-FRIENDLY COMMUNITY INITIATIVE – THE GAMBIA

I will now give an example of attempts we have made in The Gambia to break some of these barriers through a Baby-Friendly Community Initiative (BFCI) project. Breastfeeding is a universal practice in The Gambia but exclusive breastfeeding is rare and weaning foods are introduced by the age of three months. In 1993, the Nutrition Unit of the Department of State for Health initiated a pilot project - the Baby-Friendly Community Initiative. The concept of a community initiative was derived from the global UNICEF/WHO Baby-Friendly Hospital Initiative (BFHI) of 1991. This involved 12 rural communities in the Lower River Division of The Gambia.

The rationale behind the community initiative was that most deliveries in the Gambia occurred at home, and those women who delivered at health facilities only stayed there for a day or less with a normal delivery. The way mothers fed their infants was therefore influenced to a greater extent by the traditional beliefs and practices in their home environment.

The aim of the BFCI was to improve infant feeding practices in rural Gambia. Among the objectives were:

- ◇ to get 25% of mothers to practice exclusive breastfeeding for at least 4 months;
- ◇ to get 90% of mothers with normal delivery to initiate breastfeeding within an hour of delivery.

A baseline study was carried out using quantitative and qualitative methods. The aim was to identify current infant feeding practices, including the traditional beliefs and practices influencing them. All mothers with infants 0-12 months were included in the study (n=324). Results from this baseline study indicated sub-optimal feeding practices.

A methodology using an integrated approach was developed for the intervention. This included '10 steps to successful infant feeding', based on the Baby-Friendly Hospital Initiative '10 steps' (WHO, 1989). However, the community initiative went beyond breastfeeding to include maternal nutrition (using locally available foods), weaning, environmental sanitation and personal hygiene. This integrated approach was important so as to emphasize the linkages between maternal and infant nutrition, and a clean environment. It was expected that this approach would also create the opportunity for maximum community participation in the project.

The 10th step of the Baby-Friendly Hospital Initiative was used as a basis for the creation of village support groups. In this instance, mother-to-mother support groups (Kyenkya-Isabirye and Magalhaes, 1990) took on a new meaning with the inclusion of men in the groups. A village support group consisted of five women and two men - identified by their communities - to be trained to implement and monitor the initiative. Among them was the traditional birth attendant whose role in the project was crucial because she delivered babies in her community. Support group members were aware from the outset that they were voluntary and did not expect any remuneration.

Training

A guide was developed for training the village support groups. It was divided into sessions ranging from maternal and infant nutrition, to environmental sanitation and personal hygiene, using material from WHO, UNICEF and Wellstart International. In the training, the participants were viewed from a dual perspective: first as a target for attitudinal change, and second as educators for their communities. In this regard therefore, the training had a dual objective: to influence the attitude of the participants, and to equip them with relevant and adequate information for their role as educators.

How does one attempt to influence the attitude of a target person within a limited period? First of all, it is by acknowledging that the targets have their own local knowledge, which would most probably differ from our knowledge. To disregard this local knowledge could be detrimental to the achievement of the project objectives.

This meant that participants were given the opportunity to discuss a topic e.g., colostrum, based first on their local traditional knowledge. The trainer using modern scientific knowledge then presented the topic. Finally, participants were again given the opportunity to question, argue and gradually understand the topic from their own perspective. This gave us the following equation:

$$\text{Modern / Scientific Knowledge} + \text{Local / Traditional Knowledge} = \text{Credible Knowledge}$$

One example of how this equation worked, is the understanding of the concept of exclusive breastfeeding by the participants. Giving prelacteal feeds as well as water and other liquids throughout the breastfeeding duration was considered the norm. Therefore exclusive breastfeeding was a modern concept which participants could not accept. However, through discussions, participants recalled that their newborn animals (livestock)³ breastfed only without drinking any water for an unspecified period, yet they did not die. Based on this reasoning, the practice of exclusive breastfeeding seemed credible for human babies.

Apart from theoretical information, the training emphasized practical solutions to simple problems which breastfeeding mothers may encounter. These included cracked or sore nipples and engorged breasts for which avoidable causes and simple solutions were identified. It was expected that such practical information would make the support groups more persuasive and credible in their communities.

³ The Gambia is predominantly an agricultural society.

The support groups were also taught about breastmilk expression for mothers who had to be away from their infants for short periods. There was some reluctance to this based on local belief that breastmilk can turn sour if not utilized for several hours. Even mothers who are away from their babies for a few hours were, according to local tradition, expected to express and throw away the first milk before breastfeeding.

Men are important actors in infant feeding decisions but are not usually targeted by breastfeeding intervention programmes. Their involvement in this initiative as both information providers and information recipients, was a formal acknowledgement of the important role they play. It was also one step further to achieving the objectives of the BFCI. Mothers alone may find it difficult to take a decision on exclusive breastfeeding without the support of their husbands. With men as members of the support group, it was also assumed that it would be easier to convince their fellow men as well as to support their wives.

Almost all the participants were non-literate, but a graduation ceremony after the training with certificates issued to all the participants proved to be highly motivating. The ceremony, involving senior officials from the Health Ministry and other government institutions as well as NGOs, was a sign of government support and acknowledgement of their participation in the project.

There was regular monitoring and retraining of the support groups by the Nutrition Unit. According to the group members, these activities not only strengthened the groups; they also served to motivate them.

Information dissemination

Target groups were specified by the project as being pregnant and lactating women and their spouses. How information was disseminated in the communities was left entirely to the village support groups. The support groups were very innovative. They used house-to-house visits, village gatherings, ceremonies, songs, dances and role-plays to disseminate information. The '10 steps' were made into songs and were sung at every opportunity thereby enabling even small children to learn about breastfeeding and its importance. Some communities expanded their target groups to include schools, where they gave talks and choreographed plays by the pupils.

Impact – 'susundiri timaringo'

The practice of exclusive breastfeeding became universal as a result of the project. This was somewhat unexpected, given the scepticism voiced by some individuals in the communities. Breastfeeding was initiated within one hour of delivery by 87% of mothers after the intervention. A full 99.8% initiated within 24 hours of delivery. This can be compared to 40% initiation *later than 24 hours following delivery* prior to the intervention. The duration of exclusive breastfeeding also increased considerably. After the intervention 99.5% of mothers (n=413) fed only breastmilk at four months of age as opposed to only 1.3% before the intervention (n=324).

Attitudinal change was evident from the way in which colostrum was described. Before the intervention, colostrum was referred to as *bad milk, dark milk or hot milk*. After the intervention, colostrum was referred to as *the protective milk*. Furthermore, exclusive breastfeeding did not have a local name before the intervention and was regarded as a foreign concept. During the intervention, a new term in Mandinka was coined – ***susundiri timaringo*** - which translates literally as the 'complete breastfeeding', and this became a password in the communities.

The unifying effect of the project on community members was another unexpected outcome of the BFCI. Optimal breastfeeding became the concern of both mother and father, while adequate maternal nutrition became the concern of wife and husband. Environmental sanitation involved the whole community resulting in regular village clean-up.

Awareness of the importance of an enabling environment for breastfeeding mothers was raised through this initiative. This is defined as any activity that enhances the mother's capacity to practice optimal breastfeeding, specifically exclusive breastfeeding. Rural women farmers however, may face similar constraints as their counterparts in the formal sector (Saadeh et al., 1993) with regards to inadequate day care facilities at the workplace. During discussions with the communities, it was learnt that the mothers in this project were no exception. Traditional shelters at the fields, which had been used to protect infants from various weather conditions no longer existed in most of these communities. Consequently, the concept of a 'Baby Friendly Rest House' at the field, was born as a by-product of the traditional shelters and the modern crèches. Eight communities opted for them and mobilized both men and women to construct them.

A 'community maternity leave' concept was also derived from the example of a 12-week government maternity leave and the traditional 40 days rest for new mothers. This involved community assistance for the breastfeeding mother at her farm and while she stayed home with her infant, for a period of up to six months or more. It was adopted unilaterally by one community while the remaining communities chose to have it as an option for individual households.

Expressing and storing breastmilk for the infant - previously considered an undesirable practice - was now done by mothers who had been convinced by support group members that this was a safe and practical method of infant feeding. This practice was widely adopted by mothers who had to be away from their infants. The expressed milk was often stored at the foot of their clay water jars, which was believed to be the coolest place in the house.

All the above contributed to an enabling environment for rural mothers to practice exclusive breastfeeding for up to six months.

POLICY ISSUES

The success of the BFCI pilot project resulted in it being recommended for expansion nationally within the next five years (The Gambia Health Action Plan 1999-2003). The cost implications of the expansion are limited mostly to the training, retraining and evaluation of the village support groups. There are no external resources required for the dissemination of information by the support groups. They decide how and when to disseminate information. The cost to them is their time, which they are willing to give by accepting the nomination from their communities. A motivating factor, however, is the status attached to being pioneers of a community initiative, adapted from a global initiative.

Maternity protection

The Gambian example shows the importance of maternity protection measures for all working mothers whether in the formal or informal sector. These measures include adequate maternity leave, nursing breaks and crèches at workplaces. In some countries, paternity leave is an option for fathers, giving them the opportunity to provide support for the mother and her infant from the beginning.

The ILO's *Convention No. 3* from 1919, recommended at least 12 weeks maternity leave for women in commerce and industry. The updated version from 1952, *Convention No. 103*, was expanded to include coverage for non-industrial and agricultural workers, including women wage earners working at home⁴. However, this did not really change anything, since Article 7 in the same Convention (103) gave countries the option not to include these categories of workers. Moreover, the Convention was ratified by only 33 countries.

The Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) from 1979 also called for maternity protection and was ratified by 146 countries as of October 1994. Yet, maternity protection is still an issue that needs to be addressed since in most countries it is either inadequate or women do not utilize it fully through lack of information. There are still some countries which do not satisfy even the minimum requirement of 12 weeks paid maternity leave. Other countries, e.g., Norway, far exceed this requirement, with up to 52 weeks maternity leave (80% benefits) which includes optional paternity leave (UNICEF, 1997b).

Therefore, the call for governments through the Innocenti Declaration (1990) to 'enact imaginative legislation, protecting the breastfeeding rights of working women and establish means of its enforcement', is still relevant to most governments. It is, however, encouraging to note that the ILO is now engaged in a global review of maternity leave and will hopefully do everything possible to encourage governments, including the private sector, to pay heed to the above call.

Most women around the world work outside of the home but not in the formal sector. Many of these women are engaged in farming activities. While maternity protection should encompass all women regardless of the type of work they are doing, in reality, these women are excluded. Yet they are advised to practice exclusive breastfeeding for 6 months! Local communities should be encouraged and assisted to find solutions which are compatible with their traditional beliefs and practices. These should be supported by national and local policies.

Adequate and appropriate information at all levels; breastfeeding is the business of every individual

If the universal practice of optimal breastfeeding is to be achieved, adequate and appropriate information must be given at all levels of a society. Information, however, is usually targeted only at mothers and community health workers. Each given situation must be assessed to identify the barriers to optimal breastfeeding and in so doing identify **who** needs **what** information and **why**.

It is important to include all levels of health workers as they can, in some cases, create the biggest hindrance to optimal breastfeeding due to conflicting information they give mothers. Men need to also learn about breastfeeding to enable them to provide the necessary support and encouragement for the mother and her infant.

Strategies to promote breastfeeding must not, however, be limited to only technical information. The self-perceptions and social relations of the target person to be influenced must be taken into consideration (Obermeyer and Castle, 1997).

⁴See *Women's Rights to Maternity Protection, Information for Action* by the American Public Health Association (APHA), Clearinghouse on Infant Feeding and Maternal Nutrition; 1996.

Care and adequate nutrition during pregnancy and lactation

Breastfeeding ensures adequate food and care for the infant. The mother also needs special care, and should be ensured the same. Care during pregnancy and lactation should include ensuring an adequate diet for the woman, reducing her workload, and counseling her on family planning options for adequate child spacing. This would not only enhance the mother's health but also her wellbeing. The mother needs to feel that she is as important as her infant is!

Guidelines on breastfeeding and HIV/ AIDS – infant feeding options for the HIV positive mother

Breastfeeding and breastmilk may seemingly be under threat at the moment, with estimations indicating a 14% additional risk of the HIV virus being transmitted to the infant through breastmilk (Dunn et al., 1992). This can be interpreted in two ways depending on who is doing the interpretation. Firstly, for advocates of breastfeeding the risk may seem small, and options to further minimize this risk may be sought. On the contrary, for those who would benefit from the decrease in breastfeeding, this risk could be exaggerated and instead used to justify why women should not breastfeed.

All HIV infected mothers should have the chance to make an informed choice in the feeding of their infants. Therefore infant feeding recommendations for HIV-infected mothers should consist of options. These must be clear, specific and concise. Examples are: heat treatment of mother's expressed breastmilk, the traditional practice of wet nursing or expressed breastmilk from a wet nurse, with the option of feeding with artificial milk only where it is affordable and safe. However, more urgent efforts and resources need to be put into finding solutions, which would not jeopardize the breastfeeding of infants anywhere.

A CHALLENGE TO SCN MEMBER AGENCIES

The rates of optimal breastfeeding from around the world imply that national governments, even though they make pledges and set targets in international gatherings, make no real commitment to breastfeeding in the form of practical national policies and programmes. The question therefore is: how can governments and local communities be stimulated to accept breastfeeding and breastmilk as being crucial for the infant, mother, household, community and nation?

The challenge to SCN member agencies ... is to be more aggressive through their specialized areas, to literally bring home the importance and benefits of breastfeeding to governments and their policy makers.

Relatively simple and practical programmatic interventions at the international level are invariably reflected in national programmes. An example of this is the UNICEF/WHO globally-adopted Baby Friendly Hospital Initiative (UNICEF, 1997b). The challenge to SCN member agencies therefore is to be more aggressive through their specialized areas, to literally bring home the importance and benefits of breastfeeding to governments and their policy makers.

Some suggestions are:

Colostrum on the immunization schedule - Expanded Programme on Immunization (EPI)

Due to its immunological properties, colostrum is often referred to as 'the first immunization'. The Expanded Programme on Immunization therefore seems to be the obvious place to start. According to the universal immunization schedule, BCG vaccine for the prevention of tuberculosis and polio should be given at birth. There is every reason for colostrum to be placed on the same schedule to be given to the infant immediately after delivery, and specifically, within the first hour of delivery.

High immunization coverage rates are often a matter of pride for most governments outlining their achievements in the health sector. The immunization schedule is well known to health workers and parents in most parts of the world. In The Gambia for example, immunization has been found to be a motivating factor for regular attendance at infant welfare and antenatal clinics.

This simple intervention would have a tremendous impact from the level of the policy-maker to the level of the mother and father. Imagine a situation where health workers would no longer refer to colostrum loosely as the first immunization, but would actually be able to show evidence of it on the schedule for the understanding of the common person. The inclusion of colostrum on the immunization schedule would require very little resources. When training health workers, a session should be included on the immunological and anti-infective properties of colostrum and the rationale for placing it on the schedule.

Breastmilk on the essential drug list

Oral rehydration solution (ORS) is a simple solution that saves lives by preventing dehydration due to diarrhoea. ORS is therefore on the WHO list of essential drugs. Breastmilk is a more complex liquid than ORS containing nutrients as well as antibodies. Breastmilk saves millions of lives of infants and young children. Given the protective and life-saving properties of breastmilk, it becomes justifiable to include it on the essential drug list alongside ORS. This would serve to highlight and emphasize the status of breastmilk.

Breastmilk on global and national food balance sheets

Breastmilk is a major source of food for nearly 3% of the world's population, i.e., over 140 million infants born each year (Huffman et al., 1992). Therefore, breastmilk makes a substantial contribution to global and national food security. Yet despite attempts from as far back as the 1970's, there still seems to be a reluctance to include breastmilk on global and national food balance sheets!

Human milk production in Sub-Saharan Africa has been estimated to equal 50% of the total cow's milk produced in the region between 1991 - 1994 (Hatloy and Oshaug, 1997). What more information or research findings are needed to reconfirm breastmilk's importance to food security?

If breastmilk's contribution to global food security were to be boldly acknowledged by the responsible international agencies, then governments could be requested and motivated to do the same at the national level. Huge investments are made by governments to increase and improve food production as an answer to food insecurity. What is the investment in breastmilk, perhaps the world's most basic and important food?

Breastmilk on the gross national product (GNP) - gross domestic product (GDP) estimates

Breastmilk is a natural resource which, unlike most other resources, is in global abundance regardless of geographical location. But just like most natural resources, governments have to invest for their countries to benefit fully from it. However, breastmilk is a marginalized resource and is not explicitly considered by governments as contributing to the national economy.

What is the economic value of breastmilk and how can one put a value on a combination of nutrition, care, protection and life saving qualities? Any economic value of breastmilk can only be an underestimation. However, attempts made to estimate the economical value (Levine and Huffman, 1990) indicate substantial national savings with breastfeeding. One study even shows that this may increase a country's GNP by more than 5% (as estimated for Mali: Hatloy and Oshaug, 1997).

Healthier and happier mothers and infants represent less private and public expenditure on health care. Since most countries do not manufacture infant formula but have to import it, governments save foreign exchange by encouraging the use of a natural resource, which is also far superior to artificial milk.

It is time for international agencies supporting economic-based interventions to include the protection, promotion and support of breastfeeding. They should not only request but also assist countries to establish the impact of breastfeeding on national economies.

Breastfeeding as foundation of sustainable human development

In a time of dwindling resources, it makes perfect sense for the world to make the optimal use of one of its most sustainable natural resources – breastmilk. Breastfeeding is the strongest possible foundation for nutrition and care (Armstrong, 1995). Breastfeeding is sustainable because breastmilk is naturally renewable as well as vital to human development. Therefore plans of action for sustainable human development should incorporate breastfeeding.

Breastmilk - an environment-friendly product

Tin plate, plastic, paper, glass, rubber and silicon are needed for the packaging of infant milk formula and the production of bottles and teats. This requires resources; it also poses the problem of waste disposal for some of these items. It is estimated that if every baby in the USA were bottle-fed, this would require 86,000 tons of tin plate to be used for manufacturing the required 550 million baby milk tins (Radford, 1992).

Breastfeeding is environment friendly, yet how many national environmental programmes have included the promotion of breastfeeding in their plan of action? If the global plan of action for the preservation of the environment were to incorporate breastfeeding promotion as one of its strategies, this could be reflected in national environmental action plans.

Breastfeeding - a family planning option

There is no dispute on the contribution of breastfeeding to child spacing, which has been known to mothers long before being confirmed through scientific research (Short, 1992). Yet the lactational ammenohrea method (LAM) as an early form of family planning is not an option in national family planning programmes except for a committed few.

Who benefits though, from breastfeeding being downplayed as a family planning option? Definitely, not the mother or her infant and, to take it even further, not the nation -- especially one with limited resources, high fertility and low literacy rates.

It is now long overdue for international agencies concerned with population growth not only to make a firm commitment in recognizing breastfeeding's contribution to global population growth but also to include breastfeeding as a family planning option in their programmes. This commitment could trickle down to national population and family planning programmes.

Coordination

Breastfeeding and breastmilk cut across all boundaries. Regardless of race, colour, socio-economic background, shape or size, the process is the same and the product is basically the same. Virtually all the major religions of the world support and encourage breastfeeding (UNICEF, 1994). Breastfeeding benefits the mother and her infant in both industrialized and non-industrialized countries.

In a recent editorial in the Lancet, it is rightly stated that: "Policy makers need to understand that provision of a warm chain for breast-feeding is as valuable as provision of a cold chain for vaccines and likewise requires adequate resources. Governments and funding agencies need to be convinced that the investment is worthwhile." (Editorial, 1994).

While individual UN agencies have been successful in focusing global attention on the protection, promotion and support of breastfeeding, a central coordinating mechanism within the UN system seems to be missing. Such a mechanism, if put in place and given the mandate, would no doubt maintain breastfeeding high on the global and national agenda. Most importantly, a central coordinating mechanism would link breastfeeding with the relevant programmes within the UN system.

Is there a role for the SCN in this?

*...exclusive breastfeeding did not have a local name before the
intervention
and was regarded as a foreign concept.
During the intervention, a new term in Mandinka was coined
– susundiri timaringo –
which translates literally as the 'complete breastfeeding'...*

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Closing Remarks made after Ms Semega-Janneh's Lecture

Richard Jolly: Thank you for that wonderful demonstration and that wonderful example with the pictures of your community leadership and creativity. Thank you for so many good ideas that I hope the SCN, as well as the individual agencies, will find to act on. It was a wonderful lecture and I thank you for it. I would like to give the final word to George Beaton to remind us about Abraham Horwitz.

George Beaton: Thank you Mr Chairman. I want to take this opportunity to say two things if I may. One is to again thank our speaker. When you started speaking you said that you had received a fax inviting you to speak and you were surprised, then you were proud, then you began to wonder why. Today you presented a lecture that said that you should never have been surprised, you should be proud, yes, but you should never ask why. What you have done today, besides the content - which was beautiful - is remind us why we are in this room. It is to help people like you on the front line – people who are really doing things – that is why we exist. And I thank you very very much for your lecture and for reminding us.

Richard, I will now, if I may, turn to the lecture itself and what it commemorates. I have had the pleasure of knowing Dr Horwitz for quite a while. What we must recognize is that what we collectively know of him is his third career. He really built his acclaim in Chile. He was a fundamental builder of the health system in Chile, which stood up very well. Through all that happened in Chile, it survived. He was then very important in building PAHO. He wasn't *the* builder, but he was an extremely important element; he shaped the structure and made it a force for the betterment of health in Latin America. And that was his second career. I recall when he left the paid staff of PAHO, he was then looking for a third career. In PAHO, he had become very interested in nutrition. At one time he even tried to recruit me into the nutrition section – I didn't accept – but he did have a role in my life, because it was Dr Horwitz who sent me on a short leave to Guatemala, which got me interested in international nutrition, so he is to blame for my being here!

We must recognize the contribution that he made to all of us collectively. Dr Horwitz served for 11 consecutive years and sessions as chairman of the SCN, but he also served for 4 years before that as chairman of the AGN. So we're talking about a 15-year span when Dr Horwitz was very influential in this organisation. When I was writing the SCN history, I contacted a number of you for your recollections – favourable or unfavourable – of the SCN, and what it was. I was amazed at the number of comments I got back about Dr Horwitz, all favourable. I will read you only two of them because I think they are very germane.

The first comment came from John Evans, who was chairman of the SCN when Dr Horwitz was Chairman of the AGN. John drew attention to Dr Horwitz as a man, noting the 'incredible example of the intellect, integrity, diplomacy and charm, represented by the ageless Dr Horwitz'. And that was the theme of many remarks.

I think of another thing that characterised his role in the SCN – I think it was Leslie Burgess who remarked that with the incoming of Dr Horwitz, the SCN had a chairman who had the time and the interest to really put into practice what the SCN had said it wanted.

I think that Horwitz as an individual, Horwitz as a leader in nutrition, and Horwitz as a believer in the SCN is all commemorated in this lecture and I hope you will join me in celebrating Dr Horwitz and his life in nutrition.

Comment from the Reviewer

Coming from someone who says she is not an expert, Isatou Jallow Semega-Janneh's Lecture has an unusually clear vision, unusually innovative contributions to make, and is a welcome addition to the breastfeeding literature. She rightly emphasizes the fact that exclusive breastfeeding without even additional water is necessary if the benefits of breastfeeding are to be fully realized. As the ACC/SCN has earlier emphasized -- it is not being stunted but the act of becoming stunted that is harmful, and yet it starts throughout the developing world almost from birth. Little relevant research has been done yet, but one could hypothesize that if too much water and other fluids are given, breast milk will be displaced to the point where protein and/or mineral levels in the infant diet will be inadequate to achieve ideal increases in stature, even in the absence of frank illness and malnutrition.

She is equally correct to point out that exclusive breastfeeding for about six months cannot be achieved unless the newborn baby and mother receive more support than we have recognized in the past was necessary and important. She mentions economic arguments for longer maternity leave but one could also view it from a human rights perspective. If we now agree that the life of school age children should be protected from harm done by child labor, is it any more acceptable for a baby's life to be harmed through unreasonable work demands placed on the mother in the early months of life? We have an historic opportunity now to rethink this issue, as the ILO will reconsider Convention 103 on Maternity Protection at its next annual meeting in June, 1999.

Given how rare it is that one comes across really new and creative ways of approaching breastfeeding promotion, it was a pleasure to read the amazing number of fresh ideas Isatou Jallow Semega-Janneh had both at international and national level.

Even more refreshing was how the Gambian Baby Friendly Community Initiative ignored all the usual limitations that keep breastfeeding promotion limited to the health care system, and moved out to the villages. The inclusion of men in the village groups was also a crucial innovation. Only if everyone realizes the importance of maternal-infant proximity will it be possible to mobilize the necessary support. The idea of setting up baby-friendly rest houses in the fields where the mothers worked was also truly ingenious. Though less widely adopted in the trial, the "community maternity leave" concept sounds like the kind of long-term solution we would already have everywhere in the world if we had built up social systems that had taken into account the importance of exclusive breastfeeding.

It was also a pleasure to see that some kind of evaluation research was linked to the initiative from the beginning. The results, as the author herself says, were of an unexpected magnitude. While there was no control group, one can be fairly certain that such a large secular change in breastfeeding practices do not occur.

Is this approach reproducible elsewhere? Like all innovative projects, there is a risk that a dynamic person or small group was responsible for much of the impact. But one hopes that The Gambia will move ahead with its plans for national implementation and lead the way for the rest of the world!

One wonders what kinds of innovative efforts would be tried now if [the author] had been running a global effort to cope with the problem of HIV transmission through breastmilk. Presumably she would soon have determined how and where heat treatment of expressed milk, use of wet nurses, and milk banking might be used as first priority approaches for reducing the risk of mother to child transmission of HIV without risking so many infant lives and damaging public confidence in this most irreplaceable of human functions.