

# SOCIO-CULTURAL DETERMINANTS OF EXCLUSIVE BREASTFEEDING: LESSONS LEARNT FROM EXPERIENCES OF HIV-POSITIVE MOTHERS IN LUSAKA, ZAMBIA

**A.N. Hazemba, RM, MPH**

University of KwaZulu-Natal, School of Nursing and Public Health  
Corresponding author: Email: alicengomah@gmail.com

**B.P. Ncama, RN, PhD**

University of KwaZulu-Natal,  
School of Nursing and Public Health

**Y. Ahmed, FRCOG**

University Teaching Hospital,  
Lusaka, Zambia

## ABSTRACT

Breastfeeding is a culturally accepted way of feeding a baby despite the risk of HIV transmission. In the context of HIV, it is especially important to protect, promote and support exclusive breastfeeding for the first six months of life. The aim of this study was to explore socio-cultural determinants of exclusive breastfeeding to inform interventions on prevention of mother-to-child transmission of HIV among HIV-



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positive mothers in Lusaka, Zambia. We utilised ethnographic approaches and a triangulation of focus group discussions; in-depth individual interviews, participant observations and field notes to collect data. Thirty HIV-positive mothers were followed at 6 days, 6 weeks, 12 weeks and 18 weeks after delivery. Inadequate knowledge of exclusive breastfeeding was pronounced. Predominantly, mixed feeding was practised as a cultural norm and to compensate for the delay in initiation of breastfeeding for HIV-exposed infants. Use of herbs was reported for reasons varying from medication to treat abdominal pains and protection of the baby from childhood illnesses. We conclude that breastfeeding is the customary way of feeding new-born babies; however, the recommended exclusive breastfeeding for all mothers is alien in populations driven by culture. Therefore, developing culturally appropriate counselling tools that address known practices has potential to improve breastfeeding in the context of prevention of mother-to-child transmission of HIV.

**Keywords:** exclusive breastfeeding, HIV-exposed infants, HIV-positive mothers, mixed feeding, social-culture, ethnographic research, Zambia

## INTRODUCTION AND BACKGROUND INFORMATION

According to the joint United Nations Programme on HIV/AIDS (UNAIDS), at the end of 2013 an estimated 35 million people were living with HIV globally. Of these, 3.2 million were children less than 15 years, while half of the adults were women. Of the 2.1 million new HIV infections reported, 240 000 were children less than 15 years of age (UNAIDS, 2013). According to the Ministry of Health (MoH) in Zambia, the number of women living with HIV who delivered in 2012 was 81 727, from which 76 963 received efficacious antiretroviral drugs for prevention of mother-to-child transmission. These indicators showed a drop in the HIV transmission rate from mother-to-child from 24% in 2009 to 12% in 2012. However, the report showed that 5 in 10 women or their infants did not receive antiretroviral drugs during breastfeeding to prevent mother-to-child transmission of HIV (MoH, 2014). The successes recorded were achieved against the backdrop of cultural, political and social economic challenges. Therefore, reaching the current global goal of eliminating new HIV infections among children by 2015 will require not only accelerated efforts to bring services to prevent children from acquiring HIV infection to scale up, but also steps to ensure that all programmatic elements are fully implemented (UNAIDS, 2012).

In the current 2010 infant feeding guidelines, the World Health Organization (WHO) emphasised that breastfeeding, and especially early and exclusive breastfeeding, is one of the most valuable interventions for improving child survival, and it also confers many benefits in addition to reducing the risk of child morbidity and mortality (WHO, 2010). However, the customary patterns of breastfeeding that support early introduction of fluids and foods have been reported in some settings (Moland, De Paoli, Sellen, Van Esterik, Leshabari & Blystad 2010), thus posing an increased risk of HIV transmission.

Zambia is a multicultural country with minimal variations in cultural practices within the regions. To aid in achieving the country goal of virtual elimination of mother-to-child transmission of HIV, informed decisions based on country context research that focuses on social-cultural determinants of breastfeeding and lessons learnt from the region are required (Shirunga, 2010).

## STATEMENT OF THE RESEARCH PROBLEM

The success of prevention of mother-to-child transmission of HIV depends on the ability of HIV-positive mothers to implement safer infant feeding practices such as exclusive breastfeeding. In societies rooted in the cultural feeding practices, adherence to exclusive breastfeeding is a challenge for mothers to implement.

## PURPOSE OF THE STUDY

The aim of this research was to explore the socio-cultural determinants of exclusive breastfeeding to inform interventions on prevention of mother-to-child transmission of HIV among HIV-positive mothers in Lusaka, Zambia.

## RESEARCH QUESTION

What are the socio-cultural determinants of exclusive breastfeeding in Lusaka, Zambia?

## Definitions of key concepts

**Exclusive breastfeeding** is feeding the baby only breast milk and any minerals, vitamins and prescribed medicines if needed for the first six months of life.

**Herbs** are traditional medicines prepared from local wild plants.

**HIV-exposed infants** are babies born from HIV-positive mothers.

**Mixed feeding** is giving an infant solids and fluids with breast milk.

**Social culture** is shared values and beliefs by a group.

## RESEARCH METHODOLOGY

### The design

This study was designed as part of the research to develop a model for follow up of HIV-positive mothers during the first six months of infant feeding. This exploratory descriptive qualitative study utilising ethnographic procedures was based on field work conducted in Lusaka from January to September 2014. To strengthen the credibility of results, triangulation was achieved through participant observation and in-depth

interviews with HIV-positive mothers. In-depth interviews conducted with each mother were at four different intervals during the first six months of infant feeding and we achieved individual validation of data. Key informant interviews with nurses, midwives, clinical officers and nutritionists strengthened the quality of information as themes emerged in the research. Focus group discussions were held with Community-Based Volunteers (CBDs) trained as lay counsellors and men accessing antiretroviral therapy.

## Research site

The research was conducted in urban settings of Lusaka using Chelstone and Ngombe Health Centers to recruit the participants. These are sites for government programmes on prevention of mother-to-child transmission of HIV and Antiretroviral therapy.

## Study population

The focal population studied was HIV-positive mothers and key informants working in the prevention of mother-to-child transmission of HIV programmes. Interviews were also held with community volunteers and men accessing antiretroviral therapy.

## Sample

Thirty (30) HIV-positive mothers accessing services for prevention of mother-to-child transmission of HIV (PMTCT) and meeting the selection criteria were recruited and followed for six months. During recruitment, saturation was achieved when there was no longer a variation and diversity in participant characteristics of interest.

All the six (6) health care workers in the PMTCT departments from Chelstone and Ngombe Health Centers were interviewed.

One focus group discussion (FGD) comprising 10 participants was conducted with all the community-based volunteers for Chelstone. One FGD was conducted with all the 10 community-based volunteers for Ngombe.

One FGD was conducted with 15 men accessing antiretroviral therapy and whose spouses had delivered a live baby within the past year prior to this research.

## Sampling techniques

Purposive sampling was used to select all the participants in the study. To maintain a balance in age distribution among the HIV-positive mothers, recruitment was in age ranges of 18–28, 29–39 and 40+ years. Categories such as education level and social economic status were determined by employing judgmental sampling while maintaining flexibility as the themes emerged. The carefully selected study sites catered for women of different social economic status and education (Creswell, 2007:126–129a). To be selected, the mother should have attended pre-test and post-test counselling; obtained

the HIV-test results; placed on a treatment regime, counselled on infant feeding; having chosen a method of infant feeding; willing, giving written and signed consent to participate and during follow-up, the mother should have had a live baby.

## Data collection procedures

Qualitative triangulation was achieved through the use of participant observations, in-depth interviews and focus group discussions (Creswell, 2007:117–145c). A team comprising the principal investigator (PI), who is the first author, and two midwives were involved in data collection. The midwives, who were conversant in speaking Cibemba and Cinyanja and trained in counselling and prevention of mother-to-child interventions, were enrolled and trained as research assistants. They underwent a one-week training and orientation to the tools, procedures for recruitment of participants, observations and interviewing techniques, use of digital recorders and transfer of the recordings to the computers. This was followed by a one-week field orientation to the sites to test the tools, which were subsequently finalised.

In-depth interviews were conducted to address complex and sensitive topics and to allow mothers to talk about personal feelings, opinions and experiences on breastfeeding. Interviews were conducted in local languages (Cinyanja and Cibemba) depending on which one the participant was conversant with, although some were conducted in English. The interviews were conducted with each mother at 6 days, 6 weeks, 12 weeks and 18 weeks and we achieved individual validation. These participants each typically generated a large amount of information when nothing new came out of the interviews, and a total of 120 transcripts were produced. The interviews were conducted either at home for mothers, who gave permission, or at a place convenient to the mother.

Participant observation was essential for detecting meanings, feelings and experiences attached to infant feeding and to describe and identify patterns of breastfeeding relevant for making conclusions. These observations were conducted during health education talks at the health facilities, during the mothers' visits at the health facilities for growth monitoring and immunisations or at their homes as the situation dictated.

Focus group discussions to complement in-depth interviews with mothers and health care workers were conducted to explore the diversity within a population on culture and breastfeeding. Two were conducted with community-based volunteers and one with HIV-positive men.

Throughout the field work, close supervision was maintained with research assistants through regular meetings and active communication by the principal investigator.

## Data collection tools

A semi-structured interview guide was used to conduct in-depth interviews and focus group discussions to explore the social-cultural determinants to breastfeeding. This was done to enable the participants to tell their stories in their own way. During each stage of

breastfeeding, mothers were expected to observe known cultural practices and the tool was designed to explore these as the study progressed. At 6 days, the questions focused on known cultural practices of breastfeeding, and at 6 and 12 weeks we verified which practices were observed. At the time of exit from the study (18 weeks), the interviews explored the mothers' experiences of breastfeeding in the context of prevention of mother-to-child transmission of HIV.

In addition to interviews, field notes compiled by the researcher focused on breastfeeding practices when mothers visited the health centres and how they interacted with health care workers. For mothers who were visited at their homes, the observations included the general surroundings, presence of any family members for support and any aspects that had a bearing on breastfeeding practices.

## Data management

All audio files from digital recorders were downloaded on the computer and transcribed verbatim from local languages into English. All transcripts were checked for accuracy, quality and cleaned for anonymity by removing all identifiers. All field notes from observations, informal interviews were typed as soon as they were gathered. All the files were imported into the QRS Nvivo 10 version for coding and analysis, and a regular backup in the external drives was maintained throughout the project.

## Data analysis

Data were analysed using a conceptual framework analysis designed for health policy research. Data collection and analysis were conducted concurrently (Ritchie and Spencer, 2002:305–329). After data were sorted and coded, five major themes emerged: 1) knowledge of HIV transmission through breastfeeding; 2) cultural value of breastfeeding; 3) mixed feeding as a cultural norm; 4) herbal use for babies and mothers; and 5) perceived consequences of disregard of cultural practices. These common themes were highlighted to select quotes that either supported or refuted them.

## Trustworthiness

Accepted as the general standard for establishing trustworthiness for this research, we used the Lincoln and Guba's (1985) criteria of credibility, transferability, dependability, and conformability. Credibility was achieved through reflexivity and thick description of exclusive breastfeeding as a phenomenon. To establish the context of the research, we provided comprehensive description of the methods, results and ideas that can be replicated in another context. Dependability was done through a triangulation process, coding and recoding procedures as well as sifting the data to determine the themes. Confirmability was used to appraise the integrity of the results through reflexivity,

statement of researchers' beliefs and assumptions, while recognising the limitations of the study (Creswell, 2007:45–90b).

## Ethical consideration

Permission to conduct the research was obtained from the Ministry of Community Development, Mother and Child Health. Ethical clearance was granted by the Humanities and Social Sciences Research Ethics Committee of the University of KwaZulu-Natal in South Africa (HSS/0104/013D) and the Biomedical Research Ethics Committee of the University of Zambia (Reference No. 016-11-13). Voluntary participation was accorded with written consent. No identifiers were used to ensure confidentiality and privacy was observed by conducting interviews at a place convenient to the participant. The participants were free to withdraw from the study at any stage and continuity of care was assured.

## FINDINGS

### Characteristics of study participants

Thirty (30) mothers recruited were aged between 20–40 years old and were single or married, employed or unemployed. The HIV-positive men were aged 37–47 years and were either small business entrepreneurs or in formal employment, while the community-based volunteers aged 30–58 years were fully attached to the health centres as lay counsellors.

### Knowledge of HIV transmission through breastfeeding

Participants understood that HIV could be transmitted through breast milk and that the risk was higher when the mother was not on treatment for the prevention of mother-to-child transmission of HIV. They were aware that exclusive breastfeeding for the first six months reduced the risk of transmission.

... HIV transmission can be at delivery and during breastfeeding. During breastfeeding if you did not prevent then the baby can be infected (Mother, 35years).

The mothers' understanding of the role of breast milk in HIV transmission influenced their perception of the cultural practices performed to their babies and themselves during breastfeeding as described in the next section of the article.

## Cultural understanding of the value of breastfeeding

While participants were able to describe the value of breast milk, there were varied statements in the way they understood its components. Typical narratives were:

... all the foods are in the breast milk, and even if there is no food at home you can't worry because the baby has the breast milk ... (Mother, 22 years).

The milk which comes out first (colostrum) is the one which has vitamins, after that then there is nothing that you're, giving the baby and you will punish the child (Mother, 25 years).

... before breastfeeding the baby, first the dirt, the first milk (colostrum) has to come out so that it is clean that is when you breastfeed the baby the good milk (Man, 42 years)

Participants understood breast milk as food for the baby, however, their knowledge on the value of the different compositions such as colostrum had implications on the way the babies were fed. Therefore, despite infant feeding counselling, mothers practised the cultural norm of mixed feeding.

## Mixed feeding as a cultural norm

Mothers believed that the baby remains hungry on breast milk only and mixed the feeding with orange juice, cow's milk and light maize meal porridge as described by the nurse:

Yes our mothers practice mixed feeding because they feel the baby is not having enough milk from the breast, so they'd want to start giving the baby cow's milk meanwhile they're also breastfeeding ... (Registered Nurse).

Participants agreed that the babies cry of abdominal pain and hunger, forcing them to mix the feed.

In the community they say that you have to make the baby stop crying, mine stopped at three months after I started to give it porridge (Mother, 25 years).

The link between what was discussed during infant feeding counselling and the community knowledge posed challenges for mothers to adhere to exclusive breastfeeding. One participant had the following to say:

... it depends on whether the baby is still hungry even with the breast milk because sometimes some breasts produce more milk others do not. If the baby cries of hunger after you give the breast milk you start giving soft, soft porridge just like that (Mother, 22 years).

Mixed feeding was reported to commence as early as two weeks when elders advised younger women to do so, resulting in the practice being passed from generation to generation. Referring to their own babies, some participants said:



The elders want to start feeding him after he has turned two weeks or one month (Mother, 35 years).

... yes, elderly women say that the baby does not get satisfied with breast milk unless you give him porridge. The elderly ones, even now they talk about it (Mother, 32 years).

The results revealed that mothers were more concerned about the immediate needs of their babies than the risks of mixed feeding.

## Herbal use for babies and mothers

Herbal use was reported for reasons varying from use as medication, bathing and cleansing the breasts of the mother after the death of a previous baby to ward off evil spirits.

### Herbal use for medication

Herbal medication was reportedly given to the baby to drink as a performing ritual to ward off ghosts. Health care workers were aware of this practice among HIV-positive mothers.

... when the baby is discharged and they go back home the older women will tell the mothers to breastfeed but they also give herbs to the baby to drink perceived to clear the stomach (Registered Nurse).

A man in a focus group discussion added:

... in line with tradition when the child is born the grandmother comes, or I will look for someone, even pay so that they find medicine for the baby to drink and bath. Then they will tie in the waist or the neck of the baby to protect it from chibele (diarrhea). It is an old tradition that has been there before clinics came into existence (Man, 45 years).

In some cases, herbs were used to treat signs of dehydration, fever and oral thrush. A nurse had this to say:

... some of them rub the palates of the newborn baby with herbs thinking that there is an abnormality (chapamutu and chamukamwa) thus bruising the palate and definitely while breastfeeding the baby is going to get infected with HIV (Registered Nurse).

A participant confirmed the practice and identified the source of the herbs.

... the herbal medicine is taken from a 'mukuyu' tree to give the baby to drink in order to stop vomiting and diarrhea and then the baby will be fine (Mother, 32 years).

Herbal use was also reported for tattoos perceived to ward off the evil spirits of the previous dead baby.

Others get a razor blade to give traditional tattoos to prevent the spirit of the dead child to follow the new born (Mother, 23 years).

It was observed that mothers did not breastfeed immediately in the labour ward because they expected to wash the breasts with herbal medicine.

### Herbal use to wash the mother's breasts

When the mother lost the previous baby through death, she was expected to wash the breasts before breastfeeding the new born baby. The practice was associated with cleansing the breasts of bad spirits and was perceived to prevent mixing breast milk of the dead child with that of the new born baby. This practice delayed the initiation of breastfeeding after delivery. The mother who lost her children said:

... the way my children died ... this time before I breast fed, I washed my breasts with herbs because the baby may start having fits because of the spirits of the children that passed away. (Mother, 32 years).

### Perceived consequences of disregard of cultural practices

Fear and insecurity led mothers to adhere to cultural practices that were in conflict with the messages from the health facilities. The consequences of failure to observe the culturally defined norms varied from the baby contracting a childhood disease and death.

### Chibele (Diarrhea)

*Chibele* (diarrhea) was perceived to be induced by breastfeeding a baby in public where other babies were assumed to be protected with *chithumwa* (herbs) worn around the neck or waist of the baby or the mother.

... if your baby hasn't got the herbs (chithumwa) in the waist and then you meet with the baby who has, then yours will be infected with chibele (Mother, 32 years).

A community volunteer in a Focus Group Discussion said:

... mothers cannot breastfeed their babies in public when they come to the clinic for fear that their babies may get infected with chibele (diarrhoea) and other diseases (Female, Community volunteer).

### Mililo/midulo (Chest infections)

This article further reveals practices that were perceived to protect the baby from chest infections and included *kupeleka mwana kumpasa*, a practice done at the first sexual

intercourse about 6 weeks to 6 months post-delivery. After sexual intercourse, the semen would be smeared on the baby's back, joints and chest.

The elders teach us that after a baby is born and when a couple wants to resume sexual intercourse, after the act, you get the semen and smear on the baby's back, joint and chest (Mother, 29 years).

The value attached to the cultural norms and practices was based on respect for tradition that is passed from generation to generation.

## DISCUSSION

Infant feeding when a mother has HIV infection is complex in settings known to be deeply driven by culture and where mixed feeding is a norm. Mothers have to adhere to exclusive breastfeeding, which is one of the fundamental strategies in the PMTCT programmes. However, this research brings to the fore the realities faced by mothers as they choose safer feeding practices for their new born babies.

The conflicting views on the value of breast milk and especially the disregard for the significance of colostrum unveil the gaps in infant feeding counselling. Lack of knowledge of the proven nutritional value of colostrum, which contains antibodies, vitamin A, less fat and carbohydrates, thus conferring the first immunisation the baby requires the first few days after birth and essential for HIV-exposed infants, needs to be addressed (WHO, 2003; WHO, UNICEF, UNAIDS & UNFPA, 2012). Similar findings have been reported in Zambia, showing a deep rooted cultural belief that the first milk is dirty and might make the baby sick (Fjeld, Siziya, Katepa-Bwalya, Kankasa, Moland, Tylleskar & PE Group, 2008), leading to delays in initiating breastfeeding. Delays in immediate initiation of lactation undermine efforts to prevent HIV infection in the post-natal period and the success of breastfeeding. Given these findings, we assumed that mixed feeding commenced earlier than reported. Mixed feeding with cow's milk, light maize meal porridge and orange juice is known to erode the stomach mucus lining of the infant, thus predisposing it to HIV and other infections (MoH, 2014; WHO et al., 2012). A knowledge gap on how to care for new born babies by mothers, where they generally perceived crying to mean hunger and abdominal pains, led to their own interpretation of the phenomenon and the subsequent use of traditional herbs to treat diarrhoea (*chibele*), chest infections (*midulo/milio*), dehydration (*chapamutu*) and oral thrush (*chamukamwa*). The dosages and frequency of the herbs were not established as mothers indicated that they these were given to them by the elders and the effects of these herbs on HIV-exposed infants are not documented in Zambia. Our assumption was that women used herbs due to anxiety and the vulnerability created by lack of knowledge of common causes of childhood illnesses. The existing guidelines on management of childhood diseases should be part of the messages and materials to use during infant feeding counselling (WHO, 2005). We observed that the health facilities did not have the charts to illustrate common childhood ailments that could draw the

mothers' attention during antenatal clinics, children's clinics and counselling sessions. Therefore, the focus for both individual counselling and group health education should be broadened beyond infant feeding methods, to cover a variety of subjects that have a bearing on child survival among the HIV-exposed infants.

Group health education is the main method of teaching in the maternal, neonatal and child health departments. This is meant for mothers to clarify any issues related to maternal and child health, including prevention of mother-to-child transmission, and serves as a group pre-test counselling session (MoH, 2010). However, the health care workers adopted a traditional approach that leaned towards instructive and prescriptive models, while assuming the position of authority to tell mothers to exclusively breastfeed, thus creating a distance between themselves and the mothers. Critics of global policy guidelines on infant feeding and HIV have highlighted that the social and cultural distance between the producers and implementers of the infant feeding guidelines with its many recipients has generated a sense of helplessness, confusion, guilt and fear among the ones involved in the intervention (Koricho, Moland & Blystad, 2010; WHO, UNAIDS, UNFPA & UNICEF, 2010). Issues of infant feeding should be emphasised during individual infant feeding counselling to avoid group dynamics observed in this research where mothers systematically detached themselves from voices that seemed to undo health education messages.

## RECOMMENDATIONS

The following recommendations were made by the authors:

4. Intensify promotion of exclusive breastfeeding among all mothers.
5. Develop culturally appropriate counselling tools that address the known cultural practices of the populations affected.
6. Design strategies to facilitate integration of spouses, family (in-laws, mothers, grandmothers) in care to facilitate accountability of behavioural practices of breastfeeding.
7. Strengthen skills in effective communication and provide frequent updates on infant feeding guidelines among health care workers to avoid distorted information trickling down to the mothers and the community.

## LIMITATIONS OF THE STUDY

We recognised lack of generalisation of the findings beyond the group studied. However, this did not weigh down the value of research findings to inform interventions and improve breastfeeding practices among HIV-positive mothers.

## CONCLUSIONS

We conclude that a mix of cultural norms of breastfeeding is known and is holding up against current prevention of mother-to-child transmission of HIV interventions among the population studied and similar settings (Chinkonde, Hem & Sundby, 2012; Madiba and Langa, 2014). The magnitude of the HIV pandemic is a big challenge in resource-constrained countries of sub-Saharan Africa where cultural norms are rooted in the way of lives of people. We reiterate that prevention of mother-to-child transmission of HIV programmes will vary in effectiveness in different contexts unless they fundamentally respond to socio-cultural norms as lived out in communities they intend to serve (Blystad, Van Esterik, De Paoli, Sellen, Leshabari & Moland, 2010). The health care system should critically analyse available opportunities to improve breastfeeding practices among all mothers accessing maternal, neonatal and child health services.

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