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Role of Anthropology in Young Infant Feeding

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Abstract: ***Background: Infant feeding is crucial for growth and development of the child. It varies from one context to another including maternal HIV infection. Anthropologists examine infant feeding considering cultural, economic, political and historicalvariables in a single framework. Archival evidence showed reduced mortality among children breastfed from1860-1930. Historical sources provide evidence for variation of infant feeding practices and can be triangulated with ethnographic studies to suggest the best infant feeding options. Team research by anthropologists and health professionalscould generate data that complement one another thus producing evidence that best informs policy makers on young infant feeding. Method: Using Cochran library, PubMed, Medline and Google scholar search engines and terms "Research on infant feeding among HIV-infected mothers co-authored by anthropologists and pediatricians from 2000 – 2014''. A narrative literature review was conducted to determine the magnitude of anthropological and pediatric research triangulation to create an awareness of the importance of multidisciplinary collaboration on young infant feeding. Results: No studies were co-authored by anthropologists and pediatricians. Conclusion: There is insignificant collaboration between anthropologists and pediatricians in research on young infant feeding. Recommendation: Infant feeding policy changes need research collaboration betweenpediatricians and anthropologiststo enhance understanding of cultural and ecological contextual variation.***

Keywords: Young infant feeding, HIV, anthropology, pediatrics, triangulation

Abbreviations: AFASS -acceptable, feasible, affordable, safe and sustainable; EBF - exclusive breastfeeding, HIV - human **i**mmune deficiency virus; MTCT -mother-to-child transmission;
WHO - World Health Organization

Definitions: Exclusive breastfeeding- Feeding the infant on breast milk only without additional other feeds or water except for medicines, vitamins and mineral supplements.Tandem breastfeeding - Breastfeeding the immediate sibling of a newborn

1. Introduction

Socio-cultural anthropology focuses on issues touching on all aspects of life including work, ecology and environment, education, agriculture and social development. Biological anthropologists have demonstrated an evolutionary basis of hormonal responses that stimulate the contraction of the uterus and the production of milk after birth and variation in the age of weaning [1]. Historical sources provide additional evidence for the temporal variability of infant feeding practices and can be used with ethnographic evidence to suggest the best contextual infant feeding options. The unique contribution of anthropology is the examination of the broad context of young infant feeding and the potential for considering both biological and cultural dimensions in a single framework [2].

In the context of maternal HIV infection, young infant feeding has become a major challenge yet it is crucial for health, growth and development of the infant, child, nation and the entire globe. HIV transmission from the mother to the infant may be during pregnancy, delivery or breast milk. An attempt to control mother-to-child transmission of HIV through breast milk has resulted into various policy changes and practices of young infant feeding further complicating the picture.

Ethnographic research abound in the literatureand employ varied research techniques, types of data, and underlying theoretical models, leading to different policy implications on improvement of the nutritional status of young infants[3].However, researchers in health education, interventional nutrition, clinical nursing or public health have had the most influence on policy on infant feeding[4]. There is need for stakeholders and pediatricians to triangulate research to better inform policy on infant feeding based on contextual variation.

2. Method

A narrative literature review was conducted to determine the magnitude of anthropological and pediatricre search triangulation that inform policy on young infant feeding in the context of maternal HIV infection. The objective was to create an awareness of the importance of multi disciplinary collaboration on young infant feeding**.** Cochran library, PubMed, Medline and Google scholar Search engines were used to search the literature. The search terms were "Research on infant feeding among HIV-infected mothers co-authored by anthropologists and pediatricians''

Inclusion criteria
Studies on young infant feeding in the context of maternal HIV co-authored by anthropologists and pediatricians from 2000– 2014.

3. Results

Only Google scholar yielded an inventory of 3 studies at the University of Malawi noneof which were co-authored by anthropologists and pediatricians. Onlyone of the studies on status of carotenoids, Vitamin A, Vitamin E in mother-infant

dyad and anthropometric status of infants in Malawi was co-authored by an ophthalmologist, obstetrician & gynecologist and a pediatrician.

4. Discussion

Young infant feeding is a behavior that is subject to contextual variation. Socio-cultural anthropologists study the contextual variation in which infants are fed with emphasis on where, when, what, how, why and by whom infants are fed. This is achieved by staying for prolonged periods in the research context carrying out participant observation among other qualitative research methods. These include life history, focus group discussion and interviews. From the data generated, concepts are derived and eventually summarized into theoriesthat yield a better understanding and explanation of human behavior in varied ecological and socio-cultural contexts.

Breastfeeding has been the choice of infant feeding since the beginning of time due to nutritional, immunological and psychological benefits. Medical records from 17^{th} – 18^{th} century showed how changing patterns of breastfeeding reflected changing views about the appropriate roles of women as wives and mothers [5]. From1860-1930, archival evidence showed that the mortality of children not breastfed was three times that of those who were breastfed, and the protective effect on infant survival continued after weaning [6].Since then to date, many studies have been conducted demonstrating the same benefit. Unfortunately this has been a futile exercise lacking generation of new knowledge. Intellectual, human resource and financial efforts devoted to such studies should have been diverted to collaborative research and efforts geared at increasing breastfeeding worldwide considering varied cultural, ecological, economic and political contexts. The ultimate aim would be reduction of under-five mortality and, therefore, achievement of the 4^{th} millennium development goal by 2015.

Contextual Variation of Young infant Feeding

Ethnographic research in socio-cultural anthropology have been instrumental in advising policy-makers and health educators on young infant feeding in varied contexts. Ethnographic work by Panter-Brick [7] demonstrated that, women may work slightly shorter hours in the fields when they are breast feeding. Alternatively, if they work for long hours the infants will not be adequately breastfed. This work clearly demonstrates that the working breastfeeding mothers find themselves in a situation of natural conflicting interests. This has policy implications because during the period of breastfeeding mothers need support from both employers and family members in order to promote the practice of breastfeeding on demand besides having to work to earn a living and contribute to global economic development.

In Africa all mothers are expected to breastfeed their babies. However, complementary feeds are started as early as 1 week to 3 months of age due to pressure mainly from mothers-in-law and other family members and having to work. This translates into more than 95% of infants being breastfed, but feeding water, and other liquids, to breastfed infants is a widespread practice [8].In sub-Saharan Africa, young infant feeding is a challenge due to the unique cultural factors such as societal expectations and pressure from extended family on feeding and raising infants. Contrary to this practice is viewed as deviation from societal norms. This results in failure to satisfy the desire for recognition as real mothers in the society thus causing psychosocial stress, anxiety and a sense of not belonging.

Other factors affecting young infant feeding in sub-Saharan Africa are environmental factors such as having to work far away from home, poor roads, poor sanitation, lack of clean water and electricity. Low socio-economic status resulting into poverty and food insecurity cannot be ignored. In order to improve young infant feeding practices in sub-Saharan Africa, services offered by ministries of environment and natural resources, water and sanitation, energy, culture and social services have to be integrated to strike a balance. This can only be achieved through multidisciplinary research.

High prevalence of HIV in sub-Saharan Africa has led to efforts to try and reduce the transmission. One of the strategies is reduction of mother-to-child-transmission through breastfeeding. This strategy can only succeed if there is comprehension of what, why, how and by whom infants are fed in varied contexts. The ‘’why’’ aspect includes community beliefs. If the ‘’why’’ can be unraveled, the community members will adhere to the rapidly changing recommendations on young infant feeding in an effort to fight HIV pandemic.

The initial WHO recommendation of no breast feeding for HIV infected mothers was against the African society norm that all mothers must breastfeed their babies. Not to breastfeed is viewed as a symbol of rejection of the infant in order to hasten or facilitate the death of the unwanted infant. This recommendation was not acceptable by most African mothers because it went against society expectations. Therefore, choice of infant feeding has to be culturally acceptable, affordable, feasible, accessible, and sustainable (AFASS criteria). The current WHO recommendation in 2009 is that all infants in low income countries should be exclusively breastfed (EBF) for the first 6 months of life regardless of maternal HIV status in order to reduce infant morbidity and mortality [9] . Exclusive breastfeeding (EBF) might offer HIV-1-infected women in resource-limited settings an affordable, culturally acceptable [10] and effective means of reducing mother-to-child transmission (MTCT) of HIV-1 while maintaining the benefits of breastfeeding [11-15].

Influence of Socio-culture on Young infant feeding

Despite the benefits of exclusive breast feeding, the practice has not been accepted in some areas due to socio-cultural and socio-economic factors. In rural Yoruba, Nigeria EBF is believed to be dangerous to the infant and supplementary water has to be given to quench thirst and to promote normal development. Herbal teas serve as food and medicine whereas colostrum is discarded because it is thought to be dirty ‘’like pus’’ and harmful to the infant [16]. Expressed breast milk (EBM) is suspect because it can get

contaminated. HIV-positive women living in semi-rural areas of Lilongwe in Malawi believed that breast-feeding may increase the progression of HIV. Perceived lack of milk, lack of control over the feeding situation, perceived and enacted stigma and poor counseling reduced EBF to less than 50%[17]. Sixty four percent (64%) of the mothers in Huruma, Kenya did not exclusively breastfeed their infants for 6 months because they thought breast milk did not satisfy the infant[18]. In the Kenyan society, a crying infant must be hungry until proved otherwise. In most cases if a baby cries after breast feeding, alternative feeds such as cow's milk, salt and sugar solution or porridge are given to the infant regardless of the mother's approval (unpublished data).

Socio-economic status and socio-culture have to be considered when interventions are planned and designed to improve young infant feeding. In an effort to prevent mother-to-child transmission (MTCT) of HIV in Burkina Faso, formula-feeding seemed easier to implement, because formula was free of charge [19]. In Tanzania and south western Kenya cow's milk was the most socio-culturally acceptable and feasible infant feeding method for HIV-infected mothers [20, 21]. The MTCT of HIV knowledge was found to influence feeding choice in south western Kenya[22-26]while infant feeding was influenced by the socio-economic status of the mothers in Kitale District Hospital where those who had disclosed their HIV statuses to their spouses were more likely not to breastfeed than those who had not [22]. During the study period World Health organization (WHO) had recommended no breastfeeding to prevent MTCT of HIV and formula was provided free of charge to all mothers attending the clinics for prevention of mother-to-child transmission (PMTCT)of HIV purposes[27]. In Burkina Faso mothers engaged in continuous struggle with close elders to avoid fluid feeding [19] due to the great influence of elders on young infant feeding. Women who succeeded in EBF in Tanzania were older, had the support of their husbands and lived without the presence of their mother-in-law[20].Weaning at the age of 6 months was as difficult for the women as EBF [28]. In Kwa-Zulu Natal, South Africa, social stigma of HIV infection, maternal age and family influences on feeding practices, economic circumstances, beliefs about HIV transmission through breast milk; and beliefs about the quality of breast milk influenced feeding decisions [29] Living with her partner, being Muslim, having low educational level, and having not disclosed her HIV status determined infant feeding in Côte d'Ivoire [30]. The authors concluded that social acceptability must be balanced with mother-child long-term health outcomes to guide safe recommendations on infant-feeding among HIV-infected women in African urban settings.

WHO initial recommendation [27]of no breastfeeding for HIV infected mothers was highly stigmatized. The behavior of no breastfeeding was viewed as a symbol of maternal HIV infection. In Mali, wherever one sees women, one sees breastfeeding women. The Bambara word for breast milk, *shin ji*(literally ''breast water'') is used not only to refer to breast milk itself, but also to one's closest kin, those who not only share common parentage, but who share the more significant bond of having been nurtured at the breasts of the same woman. Beliefs concerning kinship and biological relatedness are very influential. Malian women place a high value on kinship bond that develops between a mother and her child as she breastfeeds. Not to breastfeed would mean giving up the tenuous connection a mother has to her children in a strongly patrilineal society [3].The recent recommendation that all mothers in resource limited settings should exclusively breastfeed (EBF) their infants for the first 6 months[31] must have been received with a sigh of relief due to reduction of HIV infection stigma, recognition as a real mother and realization of maternal full reproductive potential of being able to deliver and breastfeed her infant.

Sexuality and Infant Feeding

Sexuality is an important determinant of decisions on young infant feeding and, therefore should not be ignored by policy changes on young infant feeding. Some traditional sexual practices and beliefs promote breastfeeding whereas others act as a barrier. Post-partum taboos such as sexual abstinence during breastfeeding was believed to ensure good quality breast milk and guaranteed good infant growth [32] and prolonged lactational amenorrhea thus enhanced child spacing. In traditional African society, polygamy was encouraged to take care of the sexual needs of the men during this period. During pregnancy mothers may stop breastfeeding their infant due to the belief that the milk of a pregnant mother is bad and would harm the infant. This is contrary to scientific knowledge which encourages breastfeeding during pregnancy and tandem breastfeeding when the newborn arrives.

Among the chagga in Tanzania, child malnutrition is attributed to parental sexual misconduct, a sign of ancestral displeasure. The practice of breastfeeding while pregnant is considered dangerous because semen would spoil breast milk. The importance of postpartum abstinence during breastfeeding illustrates the linkage between food and sex. Feeding the mouth maintains life, while feeding the vagina during intercourse produces new life''. One must not have been feeding the vagina of the mother at the same time that she is feeding the mouth of her infant [2].In Busia County of western Kenya (Unpublished data), some men suckle on the breast during fore play. When such women deliver, the baby is not allowed to suckle the same breasts because the community believes that the baby would die instantly. Mothers who engage in extra marital affairs do not breast feed their infants because they believe that the infant will get ''ikhira'' or ''chira'' among the luhyas and luos of Kenya respectively (a gradual wasting disease which results into death).

In Busia county (unpublished data), typical of African context, young women do not breastfed because of fear of their breasts ''falling'' and losing shape and attraction to potential husbands. This could partly explain why breastfeeding rate is low among teenage mothers. Similarly, western culture is obsessed with the sexual nature of women's breasts and their role in attracting and keeping male attention, as well as their role in providing sexual pleasure for men and women[3].

The success of health education depends on first knowing about the community beliefs and practices. Human beings tend to practice what they strongly believe. Health education will aid in changing their beliefs. Ethnographic studies by anthropologists will give a better analysis of the situation on the ground to aid framing of health education messages in a language and manner that will be understood and acceptable to the community. Without proper and understood language there is bound to be no communication and therefore no health education.

Theory in Anthropological Research

Anthropologists conduct research to come up with theories that explain human behavior including infant feeding.Theory is essential in learning rapidly about what works by evaluating grass roots efforts in communities across the country and the world in order to implement programs, policies and environmental changes to improve health. Programs to influence health behavior, including health promotion and education programs and interventions, are most likely to benefit the participants and communities when guided by a theory of health behavior. Practical application of theory makes clear that health education and health behavior encompass the processes of policy development, which are so critical to understanding the overcoming policy resistance to dissemination of the growing number of evidence-based interventions. The gift of theory is that it provides the essential conceptual underpinnings for well-crafted research, effective practice, and healthy public policy [33].

Anthropologists are trained to conduct research that generate theories to explain human behavior. Theories of health behavior identify the targets for change and the methods for accomplishing these changes. Theories also inform the evaluation of change efforts by helping to identify the outcomes and methods of study to be used. Such theory-driven health promotion and education efforts stand in contrast to programs based primarily on precedent, tradition, intuition or general principles. Theory-driven health behavior change interventions and programs require an understanding of the components of health behavior theory as well as the operational or practical forms of the theory [34]. Such programs may have to involve anthropologists.

Promotion & Support of Exclusive Breastfeeding

Projects implementing strategies to promote and support EBF cannot succeed without the input of anthropologists. This is because before projects are initiated, identification of the needs of the people and whether the strategies will be acceptable and sustainable by the individuals, family and community has to be ascertained by an anthropologist. Most projects tend to lay emphasis on the financial aspects forgetting the perspectives of the people involved. Without the input of the anthropologists, such projects are bound to fail sooner or later. Thus the anthropologist is the link between the people, implementers and funders of projects aimed at improving young infant feeding in the community. Hence there is need to involve all the stakeholders including anthropologists in research and intervention programs aimed at improving young infant feeding.

Improving infant feeding such as EBF reduces the rate of upper respiratory tract infections and diarrhea thus reducing morbidity and mortality among children less than five (5) years of age. This will go a long way in the realization of the 4th millennium development goal of reducing the mortality of children less than five years. This can only be achieved through triangulation of research.

Triangulation

Triangulation is a combination of at least two theoretical perspectives, investigators, methodological approaches, data sources, and data analysis methods. This decreases the deficiency of a single strategy thus increasing the ability to interpret research findings and strengthening the basis on which infant feeding policy changes are made.

Multidisciplinary Research

The subjects of breasts, breastfeeding, lactation and child nutrition are all lodged in specialized disciplines, each drawing on distinct theoretical and practical traditions. These disciplines have not traditionally relied on qualitative research. As a result, breastfeeding has been seen as a complex process shaped by social and cultural forces interacting with local environmental and political conditions. Few health professionals researching on infant feeding have been trained in anthropology and make use of qualitative methods and narrative analysis, often without the abstract theoretical framing perceived to be of less relevance to policy makers. Team research by anthropologists and health professionals can build on these disciplinary differences, producing work that interfaces anthropology and epidemiology [4]. This would be instrumental in increasing rates of exclusive breastfeeding which has remained low despite centuries of interventions.

5. Conclusion

There is insignificant collaboration between anthropologists and pediatricians in research on young infant feeding. Prior to young infant feeding recommendations and policy changes, there is need for research collaboration between anthropologists and pediatricians to enhance understanding of cultural and ecological contextual variation. Optimum young infant feeding will not be achieved without triangulation of pediatrics, obstetrics, anthropology, social sciences, agriculture, economics and politics with socio-culture.

6. Recommendation

Infant feeding policy changes need research collaboration between anthropologists and pediatricians among other stakeholders to enhance understanding of cultural and ecological contextual variation.

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9. Conflict of Interest

The author has no conflicts of interest to disclose.

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