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J Hum Lact. Author manuscript; available in PMC 2019 July 30.

Published in final edited form as:

J Hum Lact. 2018 February ; 34(1): 68–76. doi:10.1177/0890334417719245.

Infant and Young Child Feeding Decision Making and Practices: Malawian Mothers' and Fathers' Roles in the Context of HIV

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Abstract

Background: Few studies in low- and middle-income countries have examined the roles of couples in infant and young child feeding decision-making and practices, and there is no corresponding data in the context of HIV.

Research Aim: To explore mothers' and fathers' perceptions of their roles in feeding decision-making and practices.

Methods: We conducted in-depth interviews with 15 mothers and their male partners recruited from the catchment areas of two urban and two rural government clinics in Lilongwe District, Malawi. The mothers were ≥ 18 years of age, HIV-positive, and had a child < 24 months of age.

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Conflicts of Interest
The authors declare that they have no conflicts of interest.

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Twelve of the 15 fathers were also HIV-positive. The interviews were analyzed using content analysis.

Results: Mothers were responsible for child care, including breastfeeding and complementary feeding. Fathers provided monetary support for purchasing food and offered verbal support to encourage mothers to implement recommended feeding practices. Many fathers found it difficult to support adequate complementary feeding because of household food insecurity. Mothers were advised on child feeding during prevention of mother-to-child transmission clinic visits. No fathers in this study accompanied women to clinic appointments, so they were less well-informed about feeding than mothers. Fathers usually deferred to mothers in feeding decision-making. One-third of mothers wanted fathers to be more involved in child feeding.

Conclusions: Malawian mothers' and fathers' roles in feeding decision-making in the context of HIV align with local gender norms. Strategies are needed to improve fathers' knowledge of and involvement in child feeding, as desired by mothers.

Background

The socioecological model is a useful framework for understanding the individual, interpersonal, health system, and community factors that influence infant and young child feeding (IYCF) behaviors (McLeroy, Bibeau, Steckler, & Glanz, 1988). Individual factors, such as a woman's knowledge and beliefs; interpersonal factors, such as support or encouragement from family members and friends; health system factors, such as advice from health workers and distance to health facilities; and community factors, such as social norms about feeding and beliefs about motherhood, interact to influence how infants and young children are fed. In this paper, we focus on individual and interpersonal factors related to feeding and through those lenses gain perspectives on social norms.

Previous studies in low- and middle-income countries showed that relatives, including fathers and grandmothers, provide support for IYCF and often influence a woman's IYCF decisions and her ability to follow the recommended practices (Aubel, 2012; S. Bilal et al., 2016; Chinkonde, Hem, & Sundby, 2012; Muluye, Woldeyohannes, Gizachew, & Tiruneh, 2012; Thet et al., 2016). Many of these studies focus on the influence of grandmothers, and little is known about fathers' perspectives of their roles in IYCF. Research in Uganda, Ethiopia, and Myanmar found that fathers see their primary role as providing food and monetary support to their families (Bilal et al., 2016; Thet et al., 2016). Fathers said that mothers are responsible for preparing the food and physically feeding the child. Other studies showed that fathers lack knowledge on optimal IYCF practices, which has a negative impact on mothers' decision making (S. M. Bilal et al., 2016; Jenkins et al., 2012; Mukuria, Martin, Egondi, Bingham, & Thuita, 2016).

Given that mothers are often the main child caregivers, but their IYCF practices may be influenced by family members, it is important to understand mothers', fathers', and grandmothers' perceptions of their roles in IYCF. In this study, we intended to interview mothers and ask them for referrals to their husbands and their own mothers, who lived within 20 kilometers. However, few of the mothers we interviewed had mothers living nearby; therefore, we investigated the roles of fathers and mothers in IYCF.

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We specifically targeted families living with HIV for several reasons. HIV-positive women face special challenges to following the recommended feeding practices because they are often stigmatized, economically disadvantaged, and may receive conflicting IYCF advice. Without interventions, 15-25% of their children will become infected with HIV through breast milk (Rollins et al., 2012). As a result, governments have put prevention of mother-to-child transmission (PMTCT) programs in place to provide antiretroviral therapy (ART) to HIV-positive pregnant and breastfeeding women and to offer IYCF counseling. In addition, international organizations have issued a series of HIV and infant feeding guidelines using a public health approach to prevent postnatal transmission and improve child survival (WHO & UNICEF, 2016). At the time of this study, HIV-positive women in low- and middle-income countries taking ART were advised to exclusively breastfeed during the first six months and continue breastfeeding until 12 months to limit child morbidity and mortality (WHO, UNICEF, UNFPA, & UNAIDS, 2010). The Ministry of Health in Malawi modified the recommendations to extend the period of breastfeeding until 24 months (WHO Regional Office for Africa, 2014); the same extended breastfeeding period was recently incorporated into World Health Organization (WHO) and UNICEF guidance (WHO & UNICEF, 2016). Current IYCF counseling for HIV-positive women in Malawi is not tailored to their individual situations and aligns with the advice on breastfeeding that is given to women who are not HIV-positive. This means that HIV-positive women taking ART are no longer placed in the difficult position of trying to wean their children early, as they were by earlier guidance (Chinkonde et al., 2012; Maman et al., 2012). However, health workers in Malawi continue to emphasize that HIV-positive women should exclusively breastfeed (Flax et al., 2016), although exclusive breastfeeding is not the norm and requires support to successfully achieve. Further, HIV-positive women who stop taking ART continue put their children at risk of transmission, especially if they do not exclusively breastfeed, and they need additional support for this behavior from family members and others.

Given the special challenges HIV-positive women face in following IYCF recommendations, this study fills a gap in the literature by describing and triangulating mothers' and fathers' perceptions of their roles in and support for IYCF decision-making and practices in the context of HIV. The information obtained was used to design a community-based intervention to promote recommended IYCF practices among HIV-positive women, including social support for IYCF from family members.

Methods

Design

This research was a cross-sectional qualitative sub-study within a larger mixed methods study on HIV and IYCF practices, conducted from June 2014-January 2015. Data were obtained through in-depth interviews and a short questionnaire on socioeconomic status. We selected this design because we wanted to rapidly collect formative data at various levels of the socioecological model for planning a pilot intervention (Bentley et al., 2014).

Ethical approval for the study was obtained from the Institutional Review Board at the University of North Carolina (#13-3615) and from the Malawi Ministry of Health's National

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Health Science Research Committee (NHSRC #1231). Signed informed consent was obtained from all study participants.

Setting

This study was conducted in Lilongwe District, Malawi. Lilongwe District differs from other districts because it includes both rural areas and the capital, with a population of approximately one million, whereas the majority of Malawians (84%) live in rural areas (The World Bank, 2016). Malawi is considered a high HIV burden country. HIV prevalence among women is 11% nationally, and 8% in Lilongwe District (National Statistical Office (NSO) [Malawi] & ICF, 2017). The prevalence in Malawi is in the middle range among sub-Saharan countries (AVERT, 2017).

IYCF practices in Malawi differ from the optimal feeding guidelines, which include exclusive breastfeeding until six months, feeding four or more food groups, feeding with adequate frequency, and continued breastfeeding until two years and beyond (WHO, 2016). In 2015, 61% of Malawian infants < 6 months of age were exclusively breastfed, 24% were fed the minimum dietary diversity, and 31% were fed the minimum meal frequency (National Statistical Office (NSO) [Malawi] & ICF, 2017). The median duration of exclusive breastfeeding and any breastfeeding was 4.1 and 21.9 months, respectively. Lilongwe District had a shorter exclusive breastfeeding duration (about 3 months) and a longer breastfeeding duration (24 months) than reported nationally. Exclusive breastfeeding prevalence in Malawi is similar to some of its neighbors, including Uganda, Kenya, and Tanzania, and higher than in other sub-Saharan countries, such as Mozambique and South Africa (UNICEF, 2016). Data on breastfeeding practices of HIV-positive women in Malawi is sparse, estimates range from 20% to 75% (Bedell, van Lettow, & Landes, 2014; Flax et al., 2016). Some reasons for the wide variation in these estimates are the location and year of data collection and the small sample sizes.

We collected data in two urban (Bwaila, Area 18) and two rural (Chileka, Mitundu) government clinics. One of the clinics was based at the district hospital and provided PMTCT services daily, whereas the other three clinics offered PMTCT services once per week. Malawi was the first country to implement PMTCT Option B+ and to recommend that HIV-positive women continue breastfeeding until 24 months. Option B+ provides lifelong ART to all HIV-infected pregnant and breastfeeding women regardless of their CD4 count or disease stage, rather than making ART available based on women's health or reproductive status (WHO, 2013). Government clinics provide a standard package of PMTCT services under Option B+, including antenatal care, IYCF group health talks, ART for mothers, and cotrimoxazole preventive therapy for mothers and children. Individual IYCF counseling to postnatal mothers in PMTCT clinics in Lilongwe District occurs infrequently (Flax et al., 2016).

Sample

We conducted in-depth interviews with HIV-positive mothers enrolled in Option B+, mothers who were lost to follow-up (LTFU) from Option B+, and their husbands or male partners. The interviewed mothers and fathers lived within the catchment areas of the four

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clinics. Mothers were eligible to participate if they were HIV-positive, ≥18 years of age, had a child < 24 months of age, and were currently participating in the Option B+ PMTCT program or had dropped out of the program > 60 days ago, defined as LTFU.

Four Malawian research assistants approached PMTCT participants during a clinic visit and invited them to participate in the interview before leaving the health facility. Health workers identified LTFU women from PMTCT patient lists and contacted them by phone or at their homes to make appointments for them to be interviewed by a research assistant. Research assistants contacted the women's male partners by phone only if the women gave the study team permission to do so.

Our larger study included 64 interviews with mothers in PMTCT or LTFU. The sample size for the sub-study was limited by the mothers' willingness to let us contact their partners and our ability to contact the fathers based on the information provided by the mothers. Some mothers in the larger study had not disclosed their HIV status and others did not want the research team to contact their husbands. For the sub-study, we conducted a total of 30 interviews – 15 with mothers and 15 with fathers. The mothers included six women currently enrolled in the Option B+ PMTCT program and nine LTFU women. Fourteen of the fathers in the study were the biological fathers of the children. The other father was the mother's current husband and cohabited with the mother and child, thereby serving in the role of father.

The number of interviews required to achieve data saturation in qualitative research is not clear cut; however, experts suggest that a minimum of six interviews per sub-group and 12 overall are need for saturation (Baker & Edwards, 2012). We had at least six interviews per sub-group and more than 12 interviews overall and we achieved data saturation with the interviews we collected.

Measurement

Food insecurity was measured separately in mothers and fathers by asking whether there are times when they do not have food in the household and do not have money to buy food. Participants who gave a positive response were then asked how frequently the household is without food or without money to buy food.

Data Collection

The Malawian research assistants were experienced interviewers trained for one week on the procedures for this study. They conducted the in-depth interviews separately with mothers and fathers. The question guides both for the mothers and fathers included sections on HIV disclosure, reactions to HIV diagnosis, mothers' and fathers' roles in IYCF, IYCF decision-making, fathers' support for feeding, problems encountered in feeding, and general understanding of the Option B+ PMTCT program (See Supplementary Materials). Question guides were developed in English by one of the American investigators, who has worked in Malawi for several years, and reviewed by Malawian co-investigators for cultural appropriateness. Guides were then translated into Chichewa by an experienced translator, the translations were reviewed and revised through a lengthy group discussion during interviewer training, and the guides were pilot tested before beginning data collection (Choi,

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Kushner, Mill, & Lai, 2012). The interviews were digitally recorded, transcribed verbatim in Chichewa, and translated into English by the interviewers. Ten percent of the translations were checked by a Malawian investigator.

The research assistants interviewed mothers participating in PMTCT in a private location at one of the clinics. LTFU mothers and fathers were interviewed either in a private location at a clinic or in their homes. When interviews were conducted in homes, the interviewers used a cover story if neighbors or relatives were present, and waited until they left before starting or continuing with the interview. Interviewers did not record participants' names on the digital recordings and voice recordings were removed from the recorders as soon as data were uploaded to a secure computer network.

Data Analysis

The research team for the overall study consisted of University of North Carolina (UNC) faculty, UNC Project-Malawi staff and research assistants, and UNC students. Members of the research team interacted with study participants during recruitment and interviews. They did not provide health services or counseling to the participants.

The analysis was conducted by a faculty member and three students, one of whom took the lead on the analysis and drafting the manuscript. We calculated descriptive statistics on the socioeconomic characteristics of the participants. For the qualitative analysis, we developed a codebook using deductive codes based upon the key domains in the interview guide (Table 1). We uploaded English transcripts to Dedoose (Version 5.0.11), where we analyzed them using content analysis (Schreier, 2013). The analysis team met on a weekly basis to discuss the coding process, alter the definitions of codes as needed, and review emerging patterns. After coding, we inserted descriptive summaries of the coded data for each interview into a data matrix in Microsoft Excel to facilitate analysis (Verdinelli & Scagnoli, 2013).

We did several things to improve the trustworthiness of our findings. Our research team included Malawians, who could provide context for the results. We triangulated our sub-study findings with results from the larger dataset, which included more interviews with mothers, observations, and interviews with health workers. The clinics were selected to represent rural and urban areas as well as larger and smaller clinics to improve transferability of the findings. We improved the dependability of repeating the findings by double coding 10% of the interviews and by making sure we achieved data saturation.

Results

On average, mothers and fathers in our sample were 28 and 35 years of age, respectively. Their youngest child was 11 months of age, and the mothers had three children. Fourteen out of 15 couples in our study were married. Eighty percent of the households experienced food insecurity, with 58% of those lacking sufficient food at least one day per week.

Nine of the women learned about their HIV status during antenatal care and six found out during other clinic visits. Most of the women, both those in PMTCT and those who were LTFU, disclosed their HIV status to their husbands on the same day they were tested, or had

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told them before they were married. Only one woman hid her status from her husband until he found her medicine. Five of the husbands of women in the PMTCT program were HIV-positive, and one had never been tested. Seven of the husbands of LTFU women were HIV-positive and two had been tested negative.

We grouped the findings into two main themes and explored mothers' and fathers' roles in IYCF decision-making and their roles in different aspects of support for IYCF. We compared results of mother-father pairs by the woman's PMTCT participation status, and found only a few differences between those in PMTCT and those who were LTFU. These differences are highlighted, but elsewhere the data from both groups are combined.

Mothers' and Fathers' Roles in IYCF Decision-making

Mothers in PMTCT saw themselves as the primary decision-makers regarding IYCF, as this exchange between an interviewer and a mother of an 8-month child (ID#1) indicates:

Interviewer (I): "I would like to know who made the decision pertaining to when to start giving the child liquids apart from breast milk, who made this decision?"

Respondent (R): "Me."

I. "Fine, what about concerning giving the child food, who made that decision?"

R. "It's me, too."

I. "And no one else was involved?"

R. "No."

Four of the LTFU mothers also saw themselves as the primary decision-makers. Three other LTFU mothers cited relatives, including the woman's mother, uncle, or husband, as the primary decision-maker, and said that they felt good about the involvement of other individuals. One LTFU mother with a 20-month child (ID#52) explained:

I: "Who made the decision on when to wean the child completely?"

R: "My uncle."

I: "Your uncle. So, how did you feel about his involvement in making this decision?"

R: "I thought he had chosen the right path for me."

Most of the fathers in this study agreed with the majority of the mothers who stated that decisions about feeding the child were the mother's responsibility.

Mothers' and Fathers' Roles in IYCF Support

Within the theme of support for IYCF, we identified several types of support, including informational, monetary, verbal, and physical. We describe mothers' and fathers' roles in each of these as well as limitations to each type of support.

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Monetary Support—All fathers in this study stated that they provided support in buying complementary foods for the child and some fathers also purchased food specifically for the breastfeeding mother. Some of the common foods that fathers bought for children were *maheu* (a maize-based drink), maize flour, soya flour, yogie (sweetened liquid yogurt), cabbage, fruits, infant formula, milk, and groundnuts. For example, one woman with a 23-month child (ID#49) said, "*When [my husband] finds money, he buys soya so that I can prepare porridge for the child, and he also buys orange [soda] and bananas."* Nearly all fathers and mothers agreed about the financial responsibility of fathers to procure food. One father (ID#81) said, *"I make sure that when I have money I give [it to my wife] to buy food for the child. I buy yogie for him because he loves yogie."* In addition to purchasing food for the child, some fathers felt responsible for providing food for their wives so that they would be able to breastfeed. One father (ID#68) said, "*When I have money I make sure I buy food for her so that she can have enough to eat, making it possible for her breasts to produce enough milk."* This shows that fathers are aware of the link between dietary intake and breast milk production.

As the quotations above demonstrate, many of the fathers began explaining their role in IYCF with the phrase *"when I have money*", indicating that poverty and food insecurity often made it difficult for them to fulfill this role in providing food for their families. Eleven out of 15 fathers reported regular household food insecurity or explicitly mentioned that it was difficult to provide monetary support for IYCF due to financial struggles. This interchange between an interviewer and a father (ID#84) illustrates the frequency of food insecurity:

I: "Is there a time that you have no food or no money to buy food?"

R: "Yes. I live in a rented house and the money I earn is not enough to support myself."

I: "How often does this occur?"

R: "Almost every month."

I: "How many times in a month?"

R: "The last two weeks of a month."

Mothers shared the same concern regarding food insecurity for both themselves and their children and described their reliance on their husbands to give them money for food or to purchase it. Many mothers explained the extent to which food insecurity impacts their daily lives. For example, mother (ID#34) said, *"To be honest, from the time my child was born until today, I have had difficulties in providing food to my child. I find it hard to get food, so we don't get to eat often. We don't eat regularly."* Food insecurity was a major stressor for some mothers because of the expectation in Malawian culture that a good mother will feed her child well and because women feel they lack of control over household food security if their husbands do not have sufficient income.

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Verbal Support—Nearly all fathers in this study stated that they offered verbal support about IYCF to the mothers, including reminders to feed the child and to listen to IYCF advice from the clinic. Except for two LTFU women, all mothers said that fathers encouraged them to listen to the advice on IYCF provided by health workers and to feed the child frequently. An LTFU woman with a 9-month child (ID#47) explained, *"[My husband] encourages me to breastfeed exclusively, and sometimes when I'm busy he tells me to stop whatever I'm doing to breastfeed the child, even when she is not crying."* Mothers appreciated this type of advice because it encouraged them to feed the child appropriately and made them aware of the father's concern for the child.

Physical support—Most fathers interviewed did not offer physical help in feeding the child. One father (ID#70) explained that feeding the child was the mother's job.

I: "Do you assist her in taking care of the child?"

R: "Sometimes I bathe the child, but when it comes to feeding, it's her role."

A few fathers said that they assisted the mothers with physically feeding the child when she was busy with other responsibilities. One father (ID#65) explained, *"If my wife is busy, then I feed the child, or when the clothes are dirty, I wash them. When she is busy and it's time to feed the child, I prepare the porridge and feed the child."* These were not commonly described forms of paternal support for IYCF because most fathers believed child feeding and other household chores were the responsibility of the mother.

Informational Support—Most of the women considered health workers as the most important source of IYCF advice and information. This conversation between an interviewer and a mother in PMTCT with a 2-month child (ID#18) shows why mothers trust IYCF advice from nurses:

I: "Of the people who gave you advice on how to feed your child, whose advice was most influential?"

R: "The nurse."

I: "Why?"

R: "Because the nurse knows everything about the human body."

None of the fathers in this study accompanied mothers to the clinic. Some of them received information about IYCF from the women following their return from clinic visits. This exchange between an interviewer and a father (ID#73) is illustrative:

I: "Did you accompany your wife when she was receiving advice concerning breastfeeding?"

R: "No, I wasn't there."

I: "So how did you accept the advice after she explained to you about it?"

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R: “I agreed [with the advice], because she was the one who went to the clinic.”

Because fathers learned about IYCF through mothers, many of them lacked information about the specifics of the feeding recommendations. A few of the fathers sought out advice on IYCF from sources other than the mothers. One father talked about IYCF with a health worker who came to their house and another went to the clinic on his own to receive advice regarding child feeding. Another father (ID#66) did not agree with the clinic advice as described by the mother and decided to take charge of IYCF decision-making:

I: “Were you in agreement with what she was advised?”

R: “I agreed, but some of the advice was not good.”

I: “Why?”

R: “They told her to breastfeed the child every three hours and this was not good… so my sister and I decided to buy milk for the child...I told her to breastfeed the child not only when the child is hungry, but most of the time she should breastfeed.”

This quote indicates the strong emphasis in Malawian culture on the importance of frequent breastfeeding and the desire by some fathers to ensure that their young children are fed often, even if that means adding formula feeds to breastfeeding. Further, it also shows that health workers may provide inaccurate or confusing advice or mothers may misinterpret the advice they are given and transmit incorrect feeding advice to fathers, prompting them, in some cases, to take action.

When we asked mothers who they would want to accompany them to the clinic when they were receiving IYCF advice, one-third of them explicitly expressed a desire for the children’s fathers to be present. For example, a mother of a 2-month child (ID#51) explained that she wanted her husband present *“so that he can play a role in finding food for me [while] I exclusively breastfeed.”* This quote suggests that some mothers are interested in fathers’ participation as a way of reinforcing or deepening men’s current roles with respect to child feeding.

Discussion

Within the context of HIV, this study found that mother-father pairs in Lilongwe District, Malawi generally had similar perceptions of their roles in IYCF decision-making and practice and these were aligned with local sociocultural and gender norms. This is consistent with one other study in Malawi, conducted among HIV-positive women prior to Option B+, which indicated that breastfeeding is central to local conceptions of motherhood (Chinkonde et al., 2012). Research in other low-income countries, not conducted in the context of HIV, also reported that women are the primary caregivers of infants and young children and breastfeeding is considered their duty (S. Bilal et al., 2016; Thet et al., 2016).

Most mothers and fathers in our sample described mothers as primary IYCF decision-makers, and fathers viewed child feeding as the mothers’ role. This aligns with other research documenting the role of women in IYCF decision making in low-income countries

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(Bedell et al., 2014). We also found that a few fathers or other family members took over the role of IYCF decision-making. Several studies in low-income countries document that a woman's decisions about when to introduce complementary foods, whether to provide formula, or when to fully wean the child may be strongly influenced or overridden by other family members, especially fathers and grandmothers (Aubel, 2012; Chinkonde et al., 2012; Kwambai et al., 2013). HIV-positive women, in particular, have found that family members may not agree when they try to exclusively breastfeed for six months or wean their babies at six months to prevent HIV transmission through breastmilk, as was previously recommended, because these practices differ from local IYCF norms (Chinkonde et al., 2012; Maman et al., 2012).

In this study, mothers and fathers indicated that the primary role of the fathers in IYCF was to provide monetary support for food purchases and the secondary role was to offer verbal support related to IYCF practices. This is consistent with other studies presenting information on male roles in IYCF and parenting (S. Bilal et al., 2016; Cuco et al., 2015; Gombachika, Sundby, Chirwa, & Malata, 2014; Thet et al., 2016). Interviews with both mothers and fathers in our study revealed that poverty and food insecurity proved to be the biggest barrier to fathers' providing for their families. In 2015, the World Bank ranked Malawi as one of the poorest countries in the world (The World Bank, 2015). Chronic and seasonal food insecurity are common in Malawi, and tend to be more pronounced in families affected by HIV, because of its impact on individual nutritional status and on household productive capacity (Anema et al., 2014). The lack of adequate food intake for the mother has been associated with early cessation of breastfeeding (Kimani-Murage et al., 2015).

When asked specifically about IYCF, fathers were generally less familiar than mothers with IYCF guidelines in the context of HIV or why they were recommended. Fathers' lack of IYCF knowledge is likely because they usually do not accompany mothers to the clinic and tend to learn about IYCF based on what the women report hearing from health workers. Some mothers stated that they wanted the fathers of their children to be present when they were receiving advice from health workers so that they would know more about the IYCF recommendations and be able to better support them. Other studies have documented men's reluctance to accompany their wives to PMTCT because the antenatal/PMTCT clinic is a space where only women are present (Cuco et al., 2015). Several strategies to increase male involvement in PMTCT have been successful, including letters of invitation to fathers encouraging them to accompany mothers to the next clinic appointment, the use of male nurses at clinics, and weekend clinic hours (Kalembo, Zgambo, Mulaga, Yukai, & Ahmed, 2013; Morfaw et al., 2013; Osoti et al., 2014; Rosenberg et al., 2015). Community-based interventions, through fathers' groups and road shows, have also increased male knowledge of IYCF and support for IYCF practices, and they indicate that men are willing to engage in supportive actions when programs are tailored to their needs (Jenkins et al., 2012; Mukuria et al., 2016; Sloand, Gebrian, & Astone, 2012).

The main strength of this study was that we conducted separate interviews with mother-father pairs, so we obtained their individual perspectives on the same situation within their households. This contrasts with other research on male roles in IYCF, which frequently

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included interviews with men only or with men and women, but not from the same households (Mukuria et al., 2016; Thet et al., 2016).

Limitations

The main limitation of this study was the number of mothers who were willing to allow us to contact their male partners and our ability to contact them with the information we were given. As a result, nearly all of our sample for the sub-study was comprised of mothers who had disclosed their HIV status and had a reasonably good relationship with their male partner. Mothers who had not disclosed or who were in difficult relationships and those mothers' male partners may have different perceptions about their roles in IYCF than our study population. This may affect the transferability of the findings to other groups in Malawi.

Conclusion

In this study, mothers' and fathers' roles in IYCF within the context of HIV followed established gender norms, with mothers taking the main responsibility and fathers providing financial and verbal support. Mothers expressed interest in having fathers more involved in IYCF. This could be achieved through programs to increase male involvement in PMTCT or community-based strategies targeting male support for IYCF.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgements

Special thanks to the research assistants in Malawi (John Chapola, Shadreck Ulaya, Angela Nyirenda, Odala Sande, and Madalo Kamanga) and at the University of North Carolina (Samantha Croffut and Ellie Carter).

Funding Acknowledgements

This research was supported by the Eunice Kennedy Shriver National Institute of Child Health & Human Development grant 5KHD001441-15 BIRCWH Career Development Program (Flax – Scholar); a developmental grant from the UNC Center for AIDS Research (P30 AI50410); the Carolina Population Center (P2C HD050924); and RTI International.

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Table 1:

Codebook used for analysis

Code	Definition	Examples
Mothers		
IYCF decision maker	People in family involved in making IYCF decisions	"My husband and I [made the decision]." "I made these decisions myself."
Father's role in IYCF	The role of and/or advice given by the husband or boyfriend regarding how to feed the child	"He encourages me to breastfeed exclusively and sometimes when I'm busy he tells me to stop just whatever I'm doing to breastfeed the child, even when she is not crying."
Desired family involvement in exclusive breastfeeding discussions	Family member(s) participant would want to have present when discussing exclusive breastfeeding	"My husband and my sister."
Disagreements on IYCF	Experiences of participant and father disagreeing on how to feed the child	"Nothing happens. We don't have disagreements."
Father's feelings about mother's ART	How father feels about participant being on ART	"He encourages me to take the drugs and reminds me each time I seem to have forgotten and sometimes he comes with me here at the hospital."
Physical or monetary support/assistance for IYCF	Help or assistance father gives to mother for caring, feeding children	"I buy yogie, milk, cabbage, rice and bottled milk. Every morning around 4 o'clock before I leave for work I make sure that my child has eaten."
Verbal support for IYCF	Types of verbal support or encouragement for IYCF father gives to mother	"I encourage her to do whatever she learns here [at the clinic.]"
IYCF decision maker	People in family involved in making IYCF decisions	"She [mother of child] was the one who made the decision because that is when she stopped breastfeeding the child."
Problems with feeding	Types of problems with breastfeeding or feeding the child	"No, she did not face any problem."
Desired role in feeding	Desired role in decision making regarding feeding	"I would like to be present when she is receiving the advice so that sometimes I will be reminding in case she forgets."
Desired family involvement in exclusive breastfeeding discussion	Who in the family should be involved in exclusive breastfeeding discussions	"I would like her mother to be there, as life in the village is sometimes challenging. Because when some hear about someone else's HIV status, they do not say good things… her mother already showed that she is comfortable with my wife's HIV status."
Disagreements regarding feeding	Consequences and repercussions of disagreements between father and mother regarding feeding	When I'm not on good terms with my wife, I still ask her if she has given the child food."
Father's participation in clinic visits	Presence of father at clinic when mother was receiving feeding advice	"No, I wasn't there. I was at work."
Feelings about mother's disclosure	Father's feelings about mother's HIV disclosure	"When I heard about it, I was worried, but because of the counseling I got from the hospital I was encouraged and accepted it."

HIV, human immunodeficiency virus; IYCF, infant and young child feeding

J Hum Lact. Author manuscript; available in PMC 2019 July 30.