

Barriers and facilitators of optimal infant and young child feeding practices during and after common childhood illnesses: An Exploratory Qualitative Study

Mastewal Erango^{1,2*}, Alemneh Kabeta³, Lemma Derseh⁴ and Afework Mulugeta⁵

¹ Department of Nursing, School of Nursing and Midwifery, Debre Berhan, Ethiopia

² Department of Human Nutrition, School of Nutrition, Food Science and Technology, College of Agriculture, Hawassa University, Hawassa, Ethiopia

³ Department of Nursing, College of Medicine and Health Sciences, Hawassa University, Hawassa, Ethiopia

⁴ Institute of Public Health, College of Medicine and Health Sciences, University of Gondar, Gondar, Ethiopia

⁵ Department of Nutrition and Dietetics, School of Public Health, College of Health Sciences, Mekelle University, Mekelle, Ethiopia

*Corresponding author: mastewalerango@gmail.com

Abstract

Background: Optimal Infant and Young Child Feeding (IYCF) practices are essential to meet the nutritional needs of children in the first two years of life. Poor IYCF practices coupled with high rates of infectious disease are the principal proximate causes of under nutrition during the first two years of age.

Objective: The purpose of this study was to explore the barriers and facilitators of IYCF practices during and after common childhood illnesses in North Shoa Zone, Ethiopia.

Method: A qualitative study was conducted by using 12 Key Informant Interviews (KIIs) among health professionals and six Focus Group Discussions (FGDs) (n=48) for collecting data from primary caregivers of children aged 6-24 months from May to July, 2021. Purposive sampling technique was used to recruit the study participants. On average, each of the six FGDs had nine participants. The FGDs and KIIs were conducted by using a structured interview guide and were tape-recorded. All FGDs and KIIs were transcribed verbatim into Amharic and translated into English. An inductive thematic analysis approach was used to identify and analyze the main concepts and key issues reported by the study participants.

Result: The main barriers to optimal Infant and Young Child Feeding (IYCF) practices were identified as perceived milk insufficiency, being a working mother, lack of knowledge and awareness, women's work load, lack of interest and economic problem. In addition, the main facilitators to optimal IYCF practices were being a mother, self-motivation, family support, health professional guidance, and support from other sectors and media exposure.

Conclusion and recommendation: Health professionals play a great role in creating awareness for caregivers regarding the recommended IYCF practices and multisectoral collaboration is recommended to improve IYCF practices during and after common childhood illnesses.

Keywords: Barriers, facilitators, IYCF practice, during and after common childhood illnesses.

Introduction

The first 1000 days from the point of conception to child's first two years of life are especially crucial for the prevention of growth failure (UNICEF, 2019). Researches indicate that this is the peak age for growth faltering, deficiencies of different micronutrients and occurrence of common childhood illnesses such as diarrhea (UNICEF 2011).

Common childhood illnesses like pneumonia and diarrhea are responsible for more than 2 million deaths of younger children worldwide every year (WHO/UNICEF 2013). These deaths are largely preventable through optimal IYCF practices and adequate nutrition (UNICEF 2012). Poor IYCF practices worldwide, especially in developing countries, are responsible for the occurrence of these common childhood illnesses. The lack of awareness

about IYCF and absence of enabling environment for Exclusive Breast Feeding (EBF) are among the causes for the common childhood illnesses (Bhutta et al. 2013). Young children experiencing an illness require adequate nutrition to recover and avoid under nutrition. Global evidence shows that children's growth deteriorates rapidly during and after illness if foods and feeding practices do not meet the additional nutrient requirements associated with illness (Kajali and Aguayo 2016). Most cost effective intervention to reduce infant mortality in developing countries is promotion of IYCF practices (Memon et al. 2010).

Ethiopia is one of the top-ranked countries in terms of child under nutrition in Sub-Saharan Africa (Blessing et al. 2017). Despite the fact that the burden of under nutrition has been declining since 2005, it continues to remain a public health problem

in Ethiopia. According to the recent report from Ethiopian Public Health Institute (EPHI), the prevalence of stunting, underweight and wasting among children under five was 39%, 22% and 11%, respectively (EPHI 2023).

To address the above-mentioned gaps and challenges, the Government of Ethiopia has developed the Food and Nutrition Policy (FNP) in 2018 and Food and Nutrition Strategy (FNS) in 2021 to accelerate the reduction of under-five under nutrition with a specific focus on multi sectoral coordination of nutrition interventions, but these targets could not be achieved and under-five under nutrition still continued to be a serious public health problem in Ethiopia. Despite some quantitative studies conducted in Ethiopia regarding child feeding practices (Nega et al. 2019), there is a shortage of evidence in exploring qualitatively the child feeding practices which are needed to better understand the socio cultural factors that promote and hinder the promotion of recommended IYCF practices during and after common childhood illnesses. Thus, the objective of this study was to explore the barriers and facilitators of IYCF during and after common childhood illnesses among 6-23 months old children in North Shoa zone, Ethiopia.

Materials and Methods

Study setting: The study was conducted in North Shoa Zone. North Shoa is one of the eleven zones in the Amhara Region with 27 woredas. Debre Berhan is the capital city of the zone, which is 130 Kilometers away from Addis Ababa in the Northeast direction. The study areas included were 5 woredas namely Angollala Tera, Basona Werena, Debre Berhan, Kewet and Moretina Jiru from May 1st to 31st July 2021.

Study design: A community based exploratory qualitative study was conducted to explore the barriers and facilitators of IYCF practices during and after common childhood illnesses in North Shoa zone, Amhara region, North Ethiopia.

Sample size: A total of 48 mothers were included in six (three urban and three rural) FGDs (8 women per group) and 12 health professionals (four from urban and 8 rural areas) participated in the KIIs.

Sampling technique: The study subjects were selected purposively in consultation with the Health Extension Workers (HEWs) for the FGD participants and the Hospital, Health Center & Health Post for the KIIs participants. For a person to be recruited to participate in the FGD, she/he had to meet the following inclusion criteria: currently, a primary caregiver to an infant/child of age 6-23

months had been a resident in the area for more than six months and willing to participate in the FGD with other community members. The primary caregivers who consented to participate in the study were invited on a scheduled day to participate in the FGD at a common local place. Again for a person to be recruited to participate in the KII, she/he had to meet the following inclusion criteria: must be a health professional and working in under-five inpatient or outpatient departments.

Study population: Primary caregivers (mothers or fathers) of infants aged 6-23 months were the study subjects for the FGD and HEWs and nurses were the participants in the KIIs to gain a comprehensive understanding of the barriers and facilitators of IYCF practices during and after common childhood illnesses.

Data collection technique and procedures: The FGDs were conducted in the community where the participants lived. FGD and KII guide with written questions and probes were used during the discussions. It included questions like current IYCF practices during and after common childhood illnesses preparation of special meal during and after common childhood illnesses, common ingredients used to prepare CF in the area, local beliefs about food selection and preparation for young children, facilitators of IYCF and barriers of IYCF during and after common childhood illnesses. The FGDs and KIIs were conducted in Amharic and facilitated by a nutritionist who was trained and had experience in FGD and KII. The FGDs were conducted in a circular seating pattern where participants could engage face to face. The FGD on each day was guided by the principal investigator using the interview guide. The proceedings of the FGD were recorded using a voice tape recorder and detailed notes were taken by the research assistants. The FGD and KII data recorded in Amharic were later transcribed verbatim into written data in the same language (Amharic). The transcribed data were then translated into English.

Ethical issues and approval: Ethical approval was obtained from Hawassa University, Institutional Review Board (Reference number: IRB/079/13) and permission to conduct the study was obtained from the North Shoa Health Bureau. Before the start of any data collection, participants were informed about their right to participate and refuse, as well as the purpose of the study and confidentiality of the information. Following this, verbal consent to participate in the study was sought from each FGD and KII participants.

Data processing and analysis: All FGDs and KIIs were transcribed verbatim directly from audios into Amharic transcripts initially by the Principal Investigator (PI). The Amharic transcripts were translated in to English by the PI. The FGD and KII findings were analyzed thematically and quotes were used to elaborate the opinions expressed by the study participants (Moirra Maguire and Delahun, 2017). An inductive thematic analysis approach was used to identify and analyze the main concepts and key

issues reported by the study participants during the discussion and interview.

Result

Characteristics of study participants: A total of 60 individuals were participated in the study for both six FGDs and twelve KIIs. The mean (SD) age of the study participants was 31.2±3.97 years, ranging from 22 to 40 years. Detailed socio demographic characteristics of the participants are described in Table 1 below.

Table 1: Background characteristics of the FGD and KII participants, North Shoa zone, Northern Ethiopia, 2020/2021

Participants' characteristics		FGD N=48		KII N=12	
		n	%	n	%
Sex	Female	44	91.7	11	92.0
	Male	4	8.3	1	8.0
Educational level	No formal education	10	21.0	—	—
	Primary education	16	33.3	—	—
	Secondary education	6	12.5	—	—
	Higher education	16	33.3	12	100
	Housewives	18	37.5	—	—
Role/ position	Daily laborer	10	21.0	—	—
	Civil servant	15	31.25	12	100
	Farmers	5	10.0	—	—
	Health extension worker	—	—	7	58.0
	BSc. nurse	—	—	5	42.0
Living or working setting	Urban	28	58.3	5	42.0
	Rural	20	41.7	7	58.0

Emergent themes

Participants in both FGDs and KIIs identified a number of factors believed to influence optimal IYCF practices during and after common childhood illnesses. The

following themes were identified as the barriers and facilitators of IYCF practices during and after common childhood illnesses (Table 2).

Table 2: Themes identified as the barriers and facilitators for IYCF practices during and after common childhood illnesses in North Shoa, Ethiopia

Category	Themes	Sub themes
Barriers	Maternal and child factors	Perceived milk insufficiency
		Lack of knowledge
		Maternal employment
		Lack of interest
Facilitators	Household factors	Women's work load
		Economic problem
	Maternal factors	Being a mother
		Self-motivation
	Household factors	Family support
	Health/nutrition service factors	Health professionals guidance
	Support structures related factors	Support from other sectors
		Media exposure

Barriers to appropriate IYCF practices during and after common childhood illnesses

There are many reasons for not adopting the recommendations for optimal IYCF practices during and after common childhood illnesses.

Perceived milk insufficiency: Mothers think that their breast milk is not enough to satisfy their babies demand. Some of the ideas that were raised are discussed below:

“...Since there is a gap in starting breast feeding early, the milk production is low. There are mothers who say their milk production is low, the milk is not enough to satisfy their [baby] hunger until the age of six month. ... From the beginning, they think that the breast milk is not enough, so that they will give milk to the baby.” (KII, Female nurse, age 30 years).

“... mothers who think their breast holds enough milk are not many. There are mothers who stop breast feeding due to this reason” (KII Female nurse, age 36 years).

Maternal employment: Those mothers who are living in urban areas are expected to go back to their work after 4 months of maternity leave. Because of these, mothers are forced to introduce complementary food to their children starting from the age of 3 months. Typical statements of the study participants are described as follows:

“...Most of the mothers who are employed will exclusively breastfeed until 3 months. Their reason is that it is not comfortable with their work.... As I said before, most mothers will introduce complementary food around 4 months especially if the mother is an employee” (KII Male nurse, age 29).

“.... In this community, may be in urban area, most mothers have less time to spend with their children. They went early to their productive work. For example, if a mother is a government employee or she has a privately owned business, the probability of going outside home once the baby is 3 or 4 months is high. Therefore, at this time she will introduce other additional thing such as formula milk, cow's milk or other complementary food forcedly” (KII Female nurse, age 36).

Lack of knowledge and awareness: there is a common traditional practice of giving sugary water for babies when they are born and giving of rue (“Tena-adam”) water when children have an abdominal cramp. This is due to a misunderstanding

among mothers for not exclusively breast feeding during the first six months of age. Some mothers do not think that breast milk is important even if complementary food is introduced. Lack of knowledge of how to enrich children's complementary food was a barrier to improving complementary feeding.

“...There is a saying that to prevent abdominal cramp, it is good to give rue. Since there are also traditional medicines, we will give it to children” (FGD, mother, 38).

“...Most of the time, there is a thinking that giving only breast milk will make the baby hungry. ..They do not think giving milk as a complementary; they give milk in addition to the breast milk. If the baby eats the complementary food, they will think it is enough for him and no need of breastfeeding” (KII Female nurse, age 30).

“...Some mothers do not express their milk for fear of contamination and do not know that the milk will stay for a long time, instead they will prepare and give other complementary food as an option” (KII Female nurse, age 36).

There were also mothers who did not know what to give for their children.

“...There is lack of knowledge on what to feed their children. There are food items on their hands but due to lack of knowledge, they are not feeding them. They do not know that they have food items on their hands that can be fed to their children” (KII Male nurse, age 29).

Women's workload: mothers especially in rural areas have lack of time to breast feed and appropriately feed their children. Some mothers introduce CF early so that they will engage in other duties. By doing so, children will have lack of interest to breast feed. Mothers from urban areas have less time to spend with their children. Due to this, they are forced to introduce additional food, such as formula milk, cow's milk and other complementary food.

A child's feeding behavior (lack of interest): even though there are motivated mothers who strive to feed their children according to the recommendation, some children are unwilling to take the food prepared.

“...When we stay at home, we will prepare food. Sometimes, I say I get hurt because of preparing food every hour by forgetting everything, but there are children who will not take it easily. In addition to this, if the mother is a government employee, she will not have time to breast feed and give complementary food. There are no reasons other than this” (FGD, mother, age 34).

Economic problem: economic problem was mentioned as the major barrier to optimal IYCF practices. It was reported by most of the study participants. To mention some of the responses:

“The first thing that is considered as a problem is economic problem. If everything is available at home, there is no way to go back ward for your children. No matter how you are tired, if your baby is crying of being hungry, your mind will not be free. If your child's stomach is full, he will play and will not bother you anymore. Thus, it is mainly economic problem” (FGD, mother, age 30).

Facilitators to appropriate IYCF practices during and after common childhood illnesses

The FGD and KII participants identified a number of facilitators for optimal IYCF practices during and after common childhood illnesses.

Being a mother: Mothers reported that being a mother by itself is one of the things that motivated them to appropriately feed their children. To mention some of the responses:

“Being a mother will make you to worry and do things frequently for your children. For example, if someone feeds my baby, I will not believe them unless I see by my own eyes. If her elders feed her, I will ask them to swear to prove me that she has eaten. I believe to some extent the nannies at the day care to some extent. When they give me an empty lunch box, I will say that she eats well today. My first question I am asking them is that whether she has eaten well or not. Being a mother makes us to repeatedly do such things” (FGD, mother, age 34).

Self-motivation: Despite the various barriers they are facing with, mothers are highly motivated to breast feed, play with their children, show and give playing materials to responsively feed their children. There were mothers who were self-motivated to breast feed their children and prepare appropriate complementary food to their children. There were also mothers who were committed and responsively feed their children during and after common

childhood illnesses. Mothers share their experiences on IYCF practices among themselves. Moreover, the improvement the mother sees on her child after implementing the recommendation is also another motivating factor.

“... There are mothers who come by themselves and take a photograph of the food items we post and they also ask us about how to prepare complementary feeding and what to use to prepare the complementary food. They are asking how they can feed their children better” (KII Female nurse, age 30).

“... There are some mothers if not all, who will express their milk and go to work. There are also few mothers who will express and put their milk until the baby reaches 6 months” (KII Female nurse, age 36).

Family support: key informants stated that mothers who are dwelling in the urban area had family support from partners or others who were found to practice an appropriate breast feeding practice.

“... marriage partners come together with their wives to health institutions and they hear and know about breast feeding, how to breast feed and how frequently to breast feed” (KII Female Nurse, age 36).

Health professional guidance: health professionals play a key role in positively influencing mothers to adopt recommended IYCF practices. Mothers visit health institutions seeking for variety of services. During their stay at health institution, they are given different health education regarding optimal IYCF practices. Most of the key informants reported that nutrition education that was given at different health institutions helped mothers to adopt and practice recommended IYCF practices.

“We call mothers to the Kebele center so that we will train them about the first 1000 days.... Starting from the pregnancy, we bring them to the kebele and give them trainings. When we organize conference starting from pregnancy, we demonstrate in development teams. We advise them even what to purchase so that they can improve their eating behavior” (Female HEW from rural kebele, Age 35).

Support from other sectors: the agriculture sector and other NGOs are motivating mothers to implement appropriate IYCF practices by educating mothers about urban agriculture, by giving seeds of vegetables as well as sheep and chicken to supplement their children feeding.

Media exposure: these days, media plays a key role in addressing different messages. Exposure to media was one of the facilitating factors for adopting the recommended IYCF practices.

Discussion

In the present study, the main barriers to optimal IYCF practices included perceived milk insufficiency, lack of knowledge, maternal employment, women's workload, a child's feeding behavior (lack of interest) and economic problem.

Perceived milk insufficiency was identified as one of the reasons for not breast feeding children exclusively. This was supported by a study conducted in rural Zimbabwe (Themba et al. 2015) which revealed that this perception was one of the reasons why mothers introduced their babies to other foods earlier than recommended. Similarly, studies conducted in Ghana (Gloria et al. 2009; Anthony et al. 2019), Democratic Republic of Congo (Jennifer et al. 2016), Nigeria (Henry et al. 2017), rural Rwanda (Jeanine et al. 2019) and Eastern Ethiopia (Abas et al. 2020) showed most women reported their children cry during or after feeding, leading them to think that their milk production was insufficient. Again, a study from Northwest Ethiopia (Mekonnen et al. 2018) showed mothers perceived that when they started field work, their milk production decreases and makes mothers give additional food to avoid hunger.

The study participants reported that they practice inappropriate IYCF practices which were against the recommendation during and after common childhood illnesses. This was attributed to lack of knowledge about optimal IYCF practices. A similar finding was observed in Zimbabwe (Maxwell et al. 2015) which showed that mothers lack correct and consistent information on the importance of EBF and its practicability. Another study from Rural Uganda (Nankumbi 2015) also revealed that participants had low knowledge levels about components of BF and CF. This finding was also in line with other studies conducted in Rural Zimbabwe (Themba et al. 2015), Democratic republic of Congo (Jennifer et al. 2016), India (Priyanka et al. 2020) and Eastern Ethiopia (Abas et al., 2020) which showed mothers lack knowledge on components of BF and how to enrich the complementary food. Since most mothers who are living in rural areas are not educated well, this may contribute to the poor knowledge of mothers. From this, we may conclude that knowledge is an important component mothers need to have in order to adopt the recommended messages regarding IYCF.

Another barrier for not appropriately breast feed children was maternal employment. If the mother is an employee, she will return to her job before the baby turns 6 months. Their tight work schedule interfered with the practice of EBF. This will put the mother to introduce pre-lacteal feeding before the age of six months. Work was mentioned as one of the main reasons for stopping EBF before the recommended age and for not continuing with Breast Feeding (BF) for two years (Hope et al. 2013). A study from Ghana (Gloria et al. 2009) showed working mothers would not have enough time to feed their infants exclusively either because of short maternity leave or inability to find a convenient feeding location. This was supported by a study conducted in Bangladesh (Kristy et al. 2015). A study from Southern Ethiopia (Bethlihem et al. 2017) showed housewives practiced EBF more than employed mothers. Besides, a study from Northwest Ethiopia (Asemahagn 2016) revealed that infants of unemployed mothers were more likely to be exclusively breastfed than infants of employed mothers. Similarly, a study from Nigeria (Henry et al. 2017) showed work activities were one of the reasons for not practicing EBF among the majority of the respondents. Currently, the maternity leave given for employed mothers in Ethiopia is 4 months. Because of this, mothers will be forced to introduce Complementary Feeding (CF) when their babies are around 3 months. This could have contributed for early introduction of CF before the age of six months. In contrast to this, a study from Ethiopia (Nega et al. 2019) revealed housewife mothers were less likely to feed their sick child appropriately than those who worked outside the home. This could be due to the fact that mothers who are staying at home will be engaged in different activities and give less attention to the baby.

Work load of mothers was also identified as one of the barriers. A study from rural Uganda (Nankumbi and Muliira 2015) revealed that the burden of other responsibilities were reported as one of the barriers to optimal IYCF practice. Another study from Democratic Republic of Congo (Jennifer et al. 2016) revealed that women's high work burden prevented mothers from properly caring their children. Again, a study from Ethiopia (Mekonnen et al. 2018) showed that mothers were not able to properly feed their children due to different workload from inside and outside households.

Lack of interest by the child to feed on the prepared food was one of the challenges faced by mothers. A study from Bangladesh (SK PAUL et al. 2015) revealed that the main reason for late introduction of CF was refusal of complementary food by infant and

young children. This was also in agreement with a study conducted in Ethiopia (Taye 2016) which showed children refused food prepared by their caregivers and because of these mothers would be disappointed and discouraged to implement optimal IYCF practices.

The other very important barrier to optimal IYCF practices identified in this study was economic problem. This was in line with the report from UNICEF showing that financial problem was the main barrier to feeding babies healthily (UNICEF 2019). This study was in consistent with other studies from Bangladesh (Kristy et al. 2015), Democratic republic of Congo and Ethiopia (Mekonnen et al. 2018) showed poverty and lack of purchasing power inhibited mothers' ability to diversify children's diet. Again, studies from rural Rwanda (Jeanine et al. 2019; Theogene et al. 2020) revealed that poverty was mentioned by many of the mothers as the main challenges faced by mothers in their feeding practices. Most mothers emphasized that poverty affects CF practices because poor households do not have enough financial resources to buy food. Most of the HEWs said that the children in their communities are not getting a variety of food for a number of reasons. Families do not have the ability to buy various types of food rather they just prepare food available at their hands.

Maternal factors (such as self-motivation and being a mother); household factor (such as family support); health/nutrition related factors (such as health professional guidance) and support structure related factors (such as support from other sectors and media exposure) were identified as the facilitators to optimal IYCF practices during and after common childhood illnesses.

Even though there are many reasons for not implementing optimal IYCF practices, there were self-motivated mothers who tried their best to breastfeed and give appropriate complementary food for their children. This was supported by a study conducted in Democratic Republic of Congo (Jennifer et al. 2016) which demonstrated that mothers were extremely motivated to breast feed and to include more nutritious food in their diets. Women also reported that they nursed their children so frequently and also most mothers fed their children on demand or each time the child asked.

Nutrition education given by health professionals was one of the facilitators of IYCF practices during and after common childhood illnesses. Health professionals provided information regarding EBF and they were also considered to be instrumental in monitoring child growth and feeding practices

(Maxwell et al. 2015). This was in line with a study conducted in Democratic Republic of Congo (Jennifer et al. 2016) which revealed that almost all mothers said they trusted the health workers' advice about child health and feeding, and many regarded them as their most credible source of advice on matters related to child care practices. Mothers who received support from different professionals were found to be benefited from their counseling (Priyanka et al. 2020). Again, this result is similar to a study conducted in other regions of Ethiopia (Nega et al. 2019) which showed that a mother who got counseling on sick child feeding were almost three times more likely to feed her child appropriately than those who did not get counseling. From this we may conclude that health professionals' advice is very important and found to be trusted and well-practiced by caregivers.

Family support was found to be one of the facilitators of optimal IYCF practice. The finding was comparable with the research conducted in rural Zimbabwe (Themba et al. 2015) which demonstrated that support from family members especially from husband was valued by mothers and KIs as important for a BF mother. Similarly, a study from India (Priyanka et al. 2020) showed mothers who had family support were more likely to exclusively breast feed for 6 months, timely introduce solid foods, try variety of food and continually reintroduce recommended food even if the baby initially rejected. Currently raising children is not an easy task. The responsibility to raise a child should not be only laid on the mothers. Fathers must also be equally responsible for their children too.

Another facilitating factor for optimal IYCF practice was an exposure to media. Similarly, a study from Northeast Ethiopia (Menberu et al. 2017) showed that mothers who were exposed to public media (either radio or television) were found to practice CF more likely than mothers who were not exposed. Another study from Ethiopia (Sunny et al. 2019) showed an intervention package of mass media had an impact on some CF practices.

Conclusion and Recommendation

The present study primarily focused on identifying barriers and facilitators of optimal IYCF practices during and after common childhood illnesses. Narratives from the interviewed participants suggests that four major barriers and facilitators to optimal IYCF practices, namely maternal-infant factors, household factors, health/nutrition service factors and support structure related factors, were identified.

The main barriers to optimal IYCF practices during and after common childhood illnesses were perceived milk insufficiency, maternal employment, lack of knowledge and awareness, work load, lack of interest and economic problem. Furthermore, the main facilitators to optimal IYCF practices identified were being a mother, self-motivation, family support, health professionals' guidance, support from other sectors and media exposure.

Thus, building the capacity of the health professionals in delivering or creating awareness among caregivers regarding the recommended IYCF practices, ensuring household food security and multi-sectoral collaboration among different sectors are recommended to improve IYCF practices during and after common childhood illnesses in the study communities.

Strengths and Limitations

To the best of our knowledge, this is the first study to explore barriers and facilitators of IYCF in North Shoa. The use of qualitative approach enabled us to gather deeper information specifically regarding the study objectives. In addition, data were collected from different settings (rural and urban) which allowed us to gain access to population with different ways of economic and living standards.

This is a qualitative study, and the sample was not representative of the entire population of primary caregivers in the zone and did not include a large number of fathers who are assumed to play a key role in child nutrition.

Despite the limitations of this study, the findings from this study can serve as a baseline data for further research and intervention.

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Competing interest

All authors declared that they have no competing interest

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