RESEARCH
O&G Forum 2024; 34 – 3s: 3157-3170

KNOWLEDGE, ATTITUDES AND PRACTICES OF COMPLEMENTARY FEEDING AMONG MOTHERS OF CHILDREN AGED BETWEEN 6 AND 24 MONTHS IN RULINDO DISTRICT, RWANDA

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Abstract
Complementary Feeding (CF) is vital for infant growth and health. Improper timing of CF introduction can lead to increased health issues and nutritional deficiencies in young children. This study assessed the knowledge, attitudes, and practices regarding CF among mothers of children aged 6 to 24 months in Rulindo District, Tare Health Center catchment area. A cross-sectional research design was used and data was collected from 227 households having children aged between 6 and 24 months. Data was collected using a structured questionnaire and focused group discussion to capture appropriate information for the study. Primary data collected was analysed using SPSS and presented using frequency tables. Data was further analyzed using frequencies and chi-square statistics to measure the association between the study variables. The study revealed that positive knowledge on Complementary feeding high is 107(73.8%), moderate Knowledge is 20(13.8%) and Poor is 18(12.8%), Positive attitude finding is 73(50.3%), Neutral is 57(39.3), Negative is 15(10.3%), for Practice about Complementary feeding finding shows is good 95 (65%), Moderate is 37(25%) and Poor is 15(9%). The findings on the first objective revealed that the majority of the mothers, 60(66.7%) indicated that the best weaning age for infants is 24 months and only 8.9% said at the age of six months. The mother's knowledge was highly significant ($\chi^2=83.561$, $p=0.000$) in determining the timely initiation of complementary feeding practices since the p-value was less than the 5% threshold. It was also found that the mother's knowledge significantly associated with breastfeeding duration and with the adequate dietary intake among children aged between 6 and 24 months. The results regarding the second specific objective showed that the majority of the mothers (79.5%) said they that breast milk alone is sufficient for a child healthy diet for the first 6 months. Most of the mothers (53.8%) said they could still continue with breast milk because it is beneficial to the child. Sex/gender of a child is not a factor in determining which foods to give the child. The mother's attitude only has a statistical significance ($\chi^2=8.409$, $p=0.015$) on adequate dietary intake for children aged between 6 and 24 months. The findings on the third objective found that majority of the mothers (41.3%) indicated their children had taken solid, semi-solid or soft food last 24 hours. The majority selected sorghum (84.4%) and maize (80.0%) as energy-giving food while 60.0% said that the meal was administered to the infants three times a day. The mother's feeding practices do not influence the timely initiation of CF, nor the dietary intake among the children aged between 6 and 24 months. However, the mother's feeding practices ($\chi^2=5.891$, $p=0.038$) were significantly associated with breastfeeding duration for children aged between 6 and 24 months. The study concludes that the mother's or the primary caregiver's knowledge on breastfeeding and complementary feeding plays a key role in CF practices. It is imperative for the government, non-governmental organizations, public health workers, health centres and the community at large to work together to improve young mother's knowledge, attitudes and feeding practices for a better and healthy nation.
Keyword: KAP, Complementary Feeding, Mothers, Children aged between 6 and 24 Months.

INTRODUCTION

Globally, 149.2 million children below five years of age were stunted and 40% were in Africa with an increased trend compared to other regions (UNICEF, 2020). In global context, figures from various nations within the European Union reveal a wide rage of ages at which complementary foods are introduced, with several countries clearly departing from the current WHO recommendation that complementary feedings be introduced only after the seventh month. These trends show there are variety of CF practices and knowledge levels among mothers. For example, according to Zielinska, *et al.*, (2019) showed that complementary food sources were presented before 4 months in 3.0% of newborn children (2.4% in Poland and4.3%

in Austria), between 4 and 6 months in 65.0% (60.5% in Poland and 75.3% in Austria).

In addition, the European Food Safety Authority (EFSA, 2019) concluded that though majority of the children do not need complementary food until age six months, there are no harmful indications if the foods are introduced early on. Further, they held that there was no any evidence showing that starting CF before six months has any benefit or harm to the infant. They however caution that an infant showing development signs of being ready for CF before age 6 month does not imply a need to introduce complementary food. These indicate the needs for adequate knowledge and attitudes towards feeding practices for infants and the knowledge of whether to introduce liquid foods, semi-solid foods or soft foods. It also requires the knowledge on the best timing to include solid foods as complementary meals for the infants. This also relates to the local requirements for exclusive feeding and gradual introduction of complementary foods.

Exclusive breastfeeding (EBF) denotes that the infant will receive the mother's milk solely for six months without any other additives (solids or liquids) from the mother or wet nurse forbidden harmful supplements which is considered as the natural method of feeding an infant creates a stronger bond between mother and child (Penacoba & Catala, 2019). Complementary Feeding (CF) is crucial for optimal nutrition in the development, growth and health of infant. Too late or too early initiation of CF is related to increased morbidity and nutritional deficiencies in children who are below five years of age children developing signs or symptoms of malnutrition. Hence, it is important to ensure that the mothers/caregivers have adequate knowledge, the right attitudes and follow acceptable feeding practices (Brown, 2016).

In global context, figures from various nations within the European Union reveal a wide rage of ages at which complementary foods are introduced, with several countries clearly departing from the current WHO (2021) recommendation that complementary feedings be introduced only after the seventh month. These trends show there are variety of CF practices and knowledge levels among mothers. For example, according to Zielinska, *et al.*, (2019) showed that complementary food sources were presented before 4 months in 3.0% of newborn children (2.4% in Poland and 4.3% in Austria), between 4 and 6 months in 65.0% (60.5% in Poland and 75.3% in Austria).

In developing country's context, youth under nourishment stays a significant medical issue in asset unfortunate settings. Around 33% of children under five years old in agricultural nations are hindered (low level for-age), and huge extents are likewise lacking in at least one micronutrients. Latest information shows that around 144 million youngsters under 5 years have hindered development, 47 million children are squandered and 14.3 million are seriously wasted, while 38.3 million are overweight or fat. Indeed, even with ideal breastfeeding children will become hindered on the off chance that they do not get adequate amounts of value reciprocal food sources following a half year old enough. The predominance pace of squandering was viewed as 2.5% and underweight was 6%, while the hindering rate stayed high at 27.0% among kids under 5 years. Undernutrition is linked to about 45% of deaths reported among children under the age of 5 as a result of insufficient knowledge, wrong attitudes and poor feeding practices (Govender, *et al.*, 2021).

In Kenya, Ahoya, *et al.*, (2022) report that only 22% of the children aged between 6-23 months met criteria for minimum acceptable diet. Hence, the need for active initiatives from government and nongovernmental bodies to educate and empower the population on the optimal complementary feeding practices. Key action plans can be effective in enhancing Exclusive Breastfeeding (EBF) and gradual introduction of Complementary Feeding (CF) such as educating young mothers and caregivers, cooking demonstrations and training, changing cultural beliefs and practices surrounding BF and CF as well as strengthening linkages in the agriculture-nutrition to ensure food security. In addition, continuous monitoring systems can help to improve the knowledge and attitudes of mothers towards CF. A study in Uganda by Kajjura, *el al.,* (2019) has emphasized the need for empowering the young mothers with sufficient knowledge in matters to do with infant feeding practices.

In Rwanda, the issue of stunting in children under the age of 5 persists regardless of the government's remarkable success in reducing infant mortality rates, there has been a decline in stunting from 51% in 2005 to 38% in 2015 and further decreased to 33% in 2020; concurrently only 22% of children from 6-24 months receive a Minimum Acceptable Diet (MAD) according to the Rwanda Demographic and Health Survey (RDHS) conducted by National Institute of Statistics Rwanda (NSIR) in collabolation with other agencies (NISR, 2020). Feeding practice like other forms of behavior is a reset of complex personal, social cultural and economic influence, which is one of the determinants of the nutritional status of children (Nsereko, 2018).

In addition, Niyigena, *et al.*, (2023) reported that there is high rate of undernutrition in Rwanda which can be attributed to Infant and Young Child Feeding (IYCF) practices. The authors found that despite timely introduction of complementary foods by 73.2% of the mothers surveyed, the feeding practices are suboptimal and poorly done. In particular, Rulindo district is still facing the challenge of feeding practices which contribute to 30.3% of children of 6-24 months stunting, 5.2% of children from 6-24 wasting and 6.9% of children from 6-24 underweight (Report MCH week Published Report RBC, 2023). Tare Health Center is located around 40 Km from Kigali. It has a total population of 22,090 people and 2,326 children of 6-59 months, 35 Villages, and 140 community health workers. Based on several research and recent Maternal Health Week, health centers catchment areas have huge gaps in times of children under malnutrition, 919 children aged 6-24 months have screened in research conducted in (May 2023 RBC, MCH Week) shows that 306 have problems with stunting contribute high rate of 33% rate of wasting of 6% and rate underweight of 7% in the district. To resolve these glaring challenges, Rulindo has initiated a Village collective cooking (IGIKONI cy'Umudududu) with practical mentorships on complementary feeding.

The main challenge Rwanda has established is all community-based Program Nutrition but the high number of malnutrition has not reduced proportionally to the intervention invested. This requires more study to address policymakers and stakeholders on how to resolve this challenge. Yet, it still remains uncertain to whether CF practices have improved given the renewed global agenda on child nutrition. There have been few studies conducted in this respect. Niyigena, *et al.*, (2023) reported that there is high rate of undernutrition in Rwanda which can be attributed to IYCF practices. The authors found that despite timely introduction of complementary foods by 73.2% of the mothers surveyed, the feeding practices are suboptimal and poorly done. In particular, Rulindo district is still facing the challenge of feeding practices among the children which contribute to 30.3% of children of 6-24 months stunting, 5.2%

of children from 6-24 wasting and 6.9% of children from 6-24 underweight (Report MCH week Published Report RBC, 2023). This article was to find out the relation among knowledge, attitudes, complementary feeding practices and social-economic demographic for mother of children aged between 6- and 24-months Tare Health Centre of Rulindo District.

MATERIALS AND METHODS

Research design

In this study, the researcher used a cross-sectional research design and adopted both quantitative and qualitative research approaches.

Participants

The target population of this study was taken from Tare Health Center in Rulindo District, which is located around 40 Km from Kigali. At the time, it had a total population of 22,090, with 227 children 6-24 months, 2,326 children 6-59 months, 35 Villages, 140 community health workers, and have rate of stunting of 33% (report MCH week May 2023). Hence, the target population was 227 households/mothers with children aged between 6 to 24 months.

Research instruments

The standard WHO questionnaire, which was originally developed to evaluate Infant and Young Child Feeding (IYCF) practices adapted and used in this study. The tool was accessible online for public users. A few modifications were made to suit the local environment. The questionnaire and focus group discussion was translated into Kinyarwanda, the language of the participants. The validity and the reliability of the questionnaire was assured since the questionnaire is adopted from WHO and has been administered in different related studies successfully. The questionnaire was comprised of both open-ended questions and closed-ended questions. In addition, focused group discussion (FGD) was conducted to provide further information about KAP among mothers of children aged between 6-24 months.

Data analysis procedure

Quantitative data analysis

Quantitative data analysis was done using the SPSS software (version 23). Descriptive statistics (frequency, mean, median, standard deviation and percentage) will beused to describe the Mother's wealth index, maternal and child demographic characteristics, maternal knowledge will be based the Bloom's Cut-off where High score will be (80%-100%), Moderate score level cut-off (60%-79%) and Low level cut –off <60% and practices about food complementary. Analysis of the mothers' attitude towards complementary feeding will be based on again Bloom's Cut-off attitude with Score (80%-100%) positive attitude, score of Neutral attitude with cut-off (60%-79%) and Negative Attitude with cut-off <60 done from scale (Komorita, 2010). The mothers indicated their levels of agreement or disagreement on individual questions on recommended complementary feeding practices using the Likert scale. The response options were allocated points ranging from one point for strongly disagree and five points for strongly agree. Scores of individual attitude-related questions were determined and summed up per mother, then they will be combined for data analysis purposes. The mean score will be calculated out (Boone & Boone, 2012). Chi-square test was used to establish associations between categorical variables such as dietary intake. For differences between continuous variables such as mother's knowledge and education levels, Analysis of Variance (ANOVA) will used (Suresh *et al.,* 2014). The P-value of <0.05 was used as a criterion for statistical significance.

Qualitative data analysis

The researcher was conduct analysis of data from the key informants' in-depth interview and from the FGDs, and then analyzed them using content analysis. This involved a keen establishment of common themes and assigning of labels to variable categories in line with the specific objectives. The data used to triangulate and complement the quantitative data from the Mother's focused group discussion. The findings from qualitative data were also useful to explain common barriers affecting/factors enhancing appropriate complementary feeding practices.

Ethical consideration

To conduct the research, approval letters from Mount Kenya University Rwanda and Tare Health Center were obtained to introduce the researcher to participants. Eligible participants were informed about the study and provided written consent to participate. They were assured that participation was voluntary and that their rights, especially those of their children, would be protected. The process was explained to them to ensure no harm would come to their children. Participants' names were kept confidential, and all provided information was securely protected. The study posed no personal risks, and participants were advised on improving their knowledge, attitudes, and practices regarding complementary feeding.

RESULTS

Table 1. Descriptive information about mothers' knowledge on complementary feeding

		Frequency	%
What are the importance of Breast feeding	Rich –Nutrients	46	31.7%
	Strong Body	42	28.9%
	Is breast child free no cost	9	6.2%
	Increase immunity of child	48	33.1%
	Others	0	0.0%
What is the stage weaning period	At 6 months	8	5.5%
	At 12 months	6	4.1%
	At 24 months	115	79.3%
	More than 24 Months	16	11.0%
What would you do if a child at 4 months is not getting enough milk	Give formula milk or cow's milk	55	37.9%
	Give porridge or introduce soft-foods	43	29.6%

		Frequency	%
	Increase breastfeeding frequency	46	31.7%
What is the appropriate time to initiate semi-solid or solid foods	At 2 months	1	0.6%
	At 3-4 months	3	2.0%
	At 6 months	131	90.3%
	Others	10	6.8%
At 6-8 months of age, how often should a baby be fed on solid, semi-solid or soft foods	Once a day	4	2.7%
	2 times a day	109	75.1%
	3-4 times a day	30	20.6%
	Others (6 times)	2	1.3%
At 9-24 months, how often should a child be given solid, semi-solid, or mashed foods	1-2 times a day	38	26.2%
	3 times a day	57	39.3%
	4-5 times a day	48	33.1%
	Other (6 times)	2	1.3%
At what age should a child be initiated the family food	9-11 months	13	8.9%
	12-14 months	103	71.0%
	15-18 months	12	8.2%
	18-24 months	17	11.7%

Source: Researcher (2024)

Table 1 shows the mothers' knowledge regarding complementary feeding for the mothers with children aged 6-24 months. The findings showed that different mothers/caregivers gave varying responses regarding the benefits of breast milk. Some of the reasons given include that the breast milk is rich with nutrients (31.7%), it helps to build a strong body (28.9%), and that breast milk is free with no additional costs (6.2%) and that it increases the immunity of the infant (33.1%). Concerning the mothers' knowledge on the weaning age, the researcher requested the mothers to indicate their most preferred age for weaning a child. Majority of the mothers, 115(79.3%) indicated that the best weaning age for infants is at 24 months. However, other mothers 16 (11.0%) indicated that the best weaning time is more than 24 months, 6(4.1%) said at 12 months while only 5.5% said at the age of six months. These results showed that most of the mothers indicate an age far than the recommended by WHO which is on the sixth month of age.

The researcher also asked the mothers to indicate what they would do if a child at 4 months is not getting enough milk. Of those who responded to this question, 37.9% said they would give formula milk or cow milk, 29.6% said they would resort to giving porridge or introduce soft-foods as a solution while 31.7% said they would increase the breastfeeding frequency. This showed that, for the majority of the mothers, they would be ready to initiate alternative foods in the early ages if the child's current breast feeding was insufficient. When asked to indicate the appropriate time to initiate semi-solid or solid foods, 131(90.3%) of the participants said it is at 6 months. Only 0.6% said at 2 months while 2.0% said at 3-4 months. Other participants (6.8%) indicated different time period. When asked to indicate how often should a baby be fed on solid, semi-solid or soft foods at 6-8 months of age, 109(75.1%) of the participants said 2 times a day, 30(20.6%) said 3-4 days, while only 2.7% said once a day and 1.3% said 6 times a day.

On the question how often should a child at 9-24 months be given solid, semi-solid, or mashed foods, 38(26.2%) indicated three times a day, 57(39.3%) to be 4-5 times a day and 57(39.3%) said 1-2 times a day. The findings indicated an overall knowledge on the side of the mothers regarding increasing feeding frequency as the infant increase in age. Concerning what age should a child be initiated to the family food, majority of the mothers 103(71.0%) said at 12-14 months, 11.7% said at 18-24 months and 8.9% indicated that it should be 9-11 months. However, 8.2% held that the best time to initiate family food should be between 15 months and 18 months.

The researcher also conducted a focused group discussion with Community Health Workers (CHWs). In this discussion, the CHWs confirmed that mother's knowledge on breastfeeding and complementary feeding is the key to better health of their children and the nation. More, the participants indicated that the main sources of information and knowledge for mothers with children aged 6-24 months in Rulindo district is from TVs, regular training from social workers and staff from district, guidelines as well as mass mobilization. However, the CHWs noted that *"this information and training are inadequate in equipping the young mothers with sufficient knowledge …most of the time the training sessions are brief and spaced out. This affects the mothers' accumulation of knowledge"* On when is the best time of initiating breastfeeding, the participants in the FGD said it should be immediate after birth, or within four hours but not later than 24 hours. However, *"one of the main challenges with young mothers is lack of knowledge on how to stimulate breast milk"*.

Table 2. Overall scores of mother's knowledge on complementary feeding

Knowledge Level		Number	Percent
Mother's Knowledge on CF	Good (80%-100%)	107	73.8%
	Moderate (60%-79%)	20	13.8%
	Poor (<60%)	18	12.4%
	Total	145	100%

Source: Researcher (2024)

Table 2 reports the overall score of the mother's knowledge on best practices on complementary feeding. As per the report, mother's knowledge was classified as good (80%-100%), moderate (60%-79%) or poor (<60%) on complementary feeding practices. The findings showed that among the mothers classified as having good knowledge on CF were 73.8%. On the other hand, the mothers who had moderate knowledge level on complementary feeding were 13.8% and with poor knowledge level were 12.4%. This showed majority of the mothers in the study were having good knowledge on complementary feeding.

Table 3: Descriptive information about mothers' attitude towards complementary feeding of children aged between 6 and 24 months

		Frequency	%
In your opinion, do you think breast milk alone is sufficient for a child's diet and survival for the first 6 months of life	Yes, it is enough	127	87.5%
	No, it is not enough	18	12.4%
How do you Think about continuing to breastfeed your child after 6 months of age to two years and beyond	It is beneficial to the child	108	74.4%
	It is not necessary after 6 months	17	11.7%
	It depends on the next pregnancy	20	13.7%
According to you when is the baby mature enough to start giving solid, semi-solid and soft foods to the child?	1-2 months	5	3.4%
	3-5months	16	11.0%
	At 6 months	120	82.7%
	7 Months	2	1.3%
	8 Months	1	0.6%
	9 Months	1	0.6%
Do you think there are some foods your baby should not eat from 6 months of age in your community, because of age?	Yes	18	12.4%
	No	127	87.5%
If yes, which foods	Banana	2	11.1%
	Potatoes	3	16.7%
	Bacon	3	16.7%
	Vegetables only	3	16.7%
	Eggs	5	27.8%
	Sweet Potatoes	1	5.6%
	Milk	1	5.6%
What is your feeling concerning giving animal-source foods to your baby from 6 months of age	It should be given to the baby	72	49.6%
	It should not be given to the baby	13	8.9%
	I am not sure	60	41.3%
What is your feeling concerning giving the child daily servings of fruits and vegetables	Beneficial to the baby	128	88.2%
	Not needed by infants/babies	11	7.5%
	They can harm the baby	6	4.1%

Source: Researcher (2024)

Table 3 shows the mother's attitude towards complementary feeding among children of 6-24 months. As per the findings, the majority of the mothers, that is 70(79.5%) said they that breast milk alone is sufficient for a child healthy diet for the first 6 months. Also, their responses indicated that breast milk is sufficient for the survival of an infant aged 6 months or below. Yet, 20.5% of the mothers said exclusive breastfeeding up to 6 months may not be sufficient. These mothers felt that at this particular age, other foods may be introduced since the breast milk Is insufficient.

On what they think about continuing to breastfeed their child after 6 months of age to two years and beyond, 53.8% of the respondents said because it is beneficial to the child. 17(21.3%) of the respondents said they would continue with breastfeeding because it is still necessary after date 12 while 25% indicated that continuation with breastfeeding depends on the next pregnancy. When asked to say when is the baby mature enough to start giving solid, semi-solid and soft foods to the child, majority 60(70.6%) said at 6 months while 18.8% said between 3-5 months and 5.9% at the age of 1-2 months. Other respondents said at 7 months (2.4%), at 8months (1.2%) and at 9 month (1.2%). These findings show positive attitude of the mothers on the contemporary feeding including the time of initiating CF and maintaining it.

On whether the respondents thought that there are some foods a baby should not eat from 6 months of age in their community because of age, 20.2% said yes and the majority 798% said no. Those who said yes went ahead to list some of these foods where 11.1% indicated banana, 16.7% potatoes, 16.7% bacon, 16.7% vegetables only, 27.8% eggs, 5.6% sweet potatoes and milk. One of the main reasons apart from age related reason is that these foods are considered to harmful to the child according to the respondents. On the question about their feeling concerning giving animal source foods to their babies from 6 months of age, 41(48.8%) felt that was fine while 13(15.5%) felt it should not be given at all to infants. However, 30(35.7%) felt that they were not sure about this. Asked about their feelings concerning serving the child daily with fruits and vegetables,53(75.7%) felt it necessary and beneficial to the baby, whereas 15.7% did not have any passion left saying that the foods were not needed by the infants yet. On the other hand, 8.6% said they can harm the baby and therefore should not be served daily. On the overall, mothers depicted positive attitude on complementary feeding

which they viewed is beneficial in increasing the child health and immune system.

Table 4: Descriptive information about mothers' attitude towards some foods as complementary foods of children aged between 6 and 24 months

		F	%
Do you think there are some foods that your child should not eat by virtue of sex/gender?	Yes	0	0.0%
	No	145	100.0%
Tick the Food restricted	Pork	1	0.6%
	Chicken and other poultry	142	97.9%
	Liver	2	1.3%
How do you feel about the nutrition education given by health workers during Cooking demonstration or at the health campaigns in your community on infant feeding	very useful	66	88.0%
	too complicated	7	9.3%
	not practical to me	0	0.0%
	I hardly get time to hear the teachings	2	2.7%
Do you think a child should be given special diets during illness?	Yes	56	62.2%
	No	34	37.8%
Type of illness	Diarrhea	142	97.9 %
	Upper respiratory infections	3	2.0 %
If so, which ones	Bacon	1	0.6%
	Dehydrated salt	3	2.0%
	Eggs	5	3.4%
	Fruits	46	31.7%
	Milk	5	3.4%
	Nothing- to heal naturally	1	0.6 %
	Porridge	36	24.8%
	preparation of food in secured hygiene	1	0.6%
	Product for child	4	2.7%
	Ripe Banana	4	2.7%
	Ripe Mangoes	2	1.3%
	Spice	3	2.0%
	Vegetables	37	25.5%

Source: Researcher (2024)

Table 4 continues to provides more information about attitude of the mothers with 6 months to 24 months infants. On whether there are some foods that a child should not eat by virtue of sex/gender, all those who answered this question (84) said no. This indicated that among the mothers participating in this study, gender is not a determining factor of the type of food to restrict an infant. The respondents were requested to indicate the type of food restricted, and only 21 answered this question. Out of these, 85.7% felt that chicken and other poultry products should be restricted in their intake because they are harmful to the infants. When asked about their feelings about the nutrition education given by health workers during cooking demonstration or at the health campaigns in the community on infant feeding, 66(88.0%) felt that the training was very useful, 7 (9.3%) felt it was too complicated and 2(2.7%) said they hardly got time to participate in the cooking demonstration. On what they think whether a child should be given special diets during illness, 56(62.2%) said yes while 34(37.8%) said no. The majority (90.3%) listed diarrhea as the recent illness experienced by their infants. During such illness, most of the mothers felt that the best food to give the infant to boost their health include fruits (23.9%), vegetables (18.3%) and porridge (16.9%). Other foods were also listed as shown in Table 4.6.

Concerning the attitudes of mothers towards complementary feeding, the findings from focused group discussion revealed that most mothers have different attitude toward feeding their children. These attitudes are basically influenced by religious beliefs, cultural practices and poverty among the young mothers. Similarly, the working mothers tend to have different attitudes towards complementary feeding. Some of the most common foods used as complementary include green vegetables, beans and potatoes; porridge with mixed cereals, maize, sorghum, beans, milk; should contain proteins, vitamins carbohydrates, rice, small fish (indagara). As one of the CWH said: *"during community cooking demonstrations, most of the mothers carry the common foods available to the community. The feeding practices and attitudes depend on the available food for the family and the children."*

Table 5: Summary scores of Mother's complementary feeding attitude level

Attitude level		Frequency	Percent
Mother's attitude	**Positive (80%-100%)**	**73**	**50.3**
	Neutral (60%-79%)	**57**	**39.3**
	Negative (<60%)	**15**	**10.3**
	Total	**145**	**100.0**

Source: Researcher (2024)

Table 5 reports the findings on the summary score of mother's attitude complementary feeding of their infants. Mothers with positive attitude were 50.3%, with neutral attitude were 39.3% while the remaining 10.3% had negative attitude.

Table 6: Descriptive information about current practices on complementary feeding among mothers

		F	%
Could tell (name) food eat any solid, semi-solid or soft food yesterday during the day or night	Yes	33	22.7%
	No	112	77.2%
Energy-giving foods	Sorghum (*amasaka*)	46	31.7%
	Maize	45	32.0%
	Potatoes	22	15.1%
	sweet potatoes	23	15.8%
	vegetable oil	5	3.4%
	Avocado	4	2.7%
Body-building foods	Milk and milk products	13	8.9%
	Eggs	7	4.8%
	Spice (*Indagara*)	36	24.8%
	Peas	3	2.0%
	Soya Bean	12	8.2%
	Bean	68	46.8%
Protective foods	leafy vegetable	124	85.5%
	Carrot	4	2.7%
	Ripe mangoes	10	6.8%
	ripe papayas	2	1.3%
	Ripe Banana	5	3.4%
How many times did (name) eat the above quantity of food	One	1	0.6%
	Twice	3	2.0%
	Three Times	141	97.2%
Did you wash your hands before handling the baby's food and feeding him/her	Yes	64	44.1%
	No	81	55.8%
Was (name) sick yesterday	Yes	141	97.2%
	No	4	2.7 %
If yes, what type of illness did (name) have yesterday	Diarrhea	128	88.2%
	Fever	2	1.3%
	Upper Respiratory tract infection	15	10.3 %
	Other	0	0.0%

Source: Researcher (2024)

Table 6 shows the participants' complementary feeding practices based on 24-hour recall. These represent the most current practices on complementary feeding practices among the mothers with infants aged 6 months to 24 months in Rulindo district. On whether the infant ate any solid, semi-solid or soft

food yesterday during the day or night, 47(58.8%) of those who responded said no while 33(41.3%) said yes. The respondents further identified the various categories of complementary foods based on their benefits to the infant's health. Majority selected sorghum (84.4%) and maize (80.0%) as energy giving food necessary to be used as complementary food for the growing infants who need food that boost their energy. Majority selected beans (50.0%) as the most common body-building food used as complementary food while 40.0% chose spice *(indagara).*
For the protective foods used as complementary foods for infants in the age bracket 6-24 months, leafy vegetables got the highest response with a 90.0% with ripe mangoes at a distance 11.1% of the responses. However, very few (10 participants) responded when asked about the frequency of food intake for the above-named foods in the last 24 hours. Among these, 60.0% said that the meal was administered to the infants three times a day. On whether they washed their hands before handling the baby's food and feeding him/her, 32(39.5%) said yes and 49(60.5%) said no. When asked to indicate whether the infant was sick the day before, 66(94.3%) indicated yes while only 5.7% said no. This showed that majority of those who responded indicated that they did not observe hand cleanliness when handling and preparing infant food and that majority of these infants fell sick in the last 24 hours. On what type of illness the infant had, 51(75.0%) said diarrhea and 15(22.1%) said upper respiratory track infection. In the overall, the findings showed that mothers had good complementary feeding practices for their infants aged between 6-24 months though much improvement should be done.

Table 7: Descriptive information about observational practices of complementary feeding practices among mothers

		N	%
Family has a kitchen garden	Yes	118	81.3%
	No	27	18.6 %
The family has Proper Toilette which is clean	Yes	19	13.1%
	No	126	86.8%
Family have Hand washing	Yes	6	4.1%
	No	139	95.8%
The family has clean utensils that are used to prepare the child's food	Yes	30	20.6%
	No	115	79.3%
Children is taking Multiple Micronutrient Powder	Yes	131	90.3%
	No	14	9.6%
Children is in the shisha Kibondo Program	Yes	138	95.1%
	No	7	4.8 %

Source: Researcher (2024)
Table 7 shows the mothers' observational practices in regards to complementary feeding practices for the mothers with children aged 6-24 months in Rulindo district. On the statement that the family has a kitchen garden, 57(67.9%) of the participants said yes while 27(32.1%) said no. On whether the family has Proper Toilette which is clean, 68(78.2%) said no and 19(21.8%) said yes. Similarly, majority (92.8%) said they don't have an area for washing hands. On the statement that family has clean utensils that are used to prepare the child's food, 64.3% said no and 35.7% said yes. On whether the child is taking multiple micronutrient powder, 70(83.3%) said es and 14(16.7%) said no. During the FGD, the community health workers noted that "*poor hygiene and cooking practices among the young mothers"* in Rulindo district affect the complementary feeding practices. The participants also indicated that they train the mothers through community cooking demonstrations. However, following up and assessing how the mothers are practicing what they learn is a daunting task. Most of the assessment are done periodically when the CHWs visit the mothers' home or when the mothers come for community cooking demonstration. This may not help to monitor effectively their practices. Also, one of the participants noted that *"malpractices, mothers with low food supply, working mothers, depending on mother's activities for food supply, poverty, poor hygiene and low participation of fathers are the main factors that hinder healthy practices among the mothers with children between 6-24 months."*

Table 8: Summary of scores of mother's complementary feeding practices

Level of practice		Number	Percent
Mother's Feeding practices	Good (80%-100%)	95	65.5
	Moderate (60-79%)	37	25.5
	Poor (<60%)	13	9.0
	Total	145	100.0

Source: Researcher (2024)
Table 8 shows the summary of scores conducted on mother's complementary feeding practices. The reported findings showed that majority of the mothers had good feeding practices at 65.5%. However, much is to be done since a sizeable number of mothers 37(25.5%) had moderate feeding practice and 9% were at poor level.

Table 9: Summary of Mother's Knowledge level within tabulated summary level of Mother's Attitude

		Mother's Attitude on CF							
		Positive		Neutral		Negative		Total	χ^2 (p-value)
		N	%	N	%	N	%		
Mother's Knowledge on CF	Good	59	55.1%	41	38.3%	7	6.5%	107	13.79 (.008)
	Moderate	5	25.0%	12	60.0%	3	15.0%	20	
	Poor	9	50.0%	4	22.2%	5	27.8%	18	
	Total	73		57		15		145	

Source: Researcher (2024)

Table 9 reports the summary of mother's knowledge level within the tabulated summary level of mother's attitude on complementary feeding practices. The result showed that 55.1% of the mothers with good knowledge level had positive feeding practices, 38.3% had neutral attitude while 6.5% hade negative attitude. For the mothers with moderate level of knowledge,60% had neutral attitude towards CF while those with poor knowledge 50% had positive attitude on CF. The analysis of mother's knowledge level within the tabulated mother's attitude was found to be statistically significant $(\chi^2 = 13.79, p = 0.008)$since the p-value was less than 5%.

Table 10: Summary of Mother's Knowledge level within tabulated summary level of Mother's Feeding Practices

		Mother's Feeding Practices							
		Good		Moderate		Poor		Total	χ^2 (p-value)
		N	%	N	%	N	%		
Mother's Knowledge on CF	Good	81	75.7%	15	14.0%	11	10.3%	107	31.86 (.002)
	Moderate	10	50.0%	10	50.0%	0	0.0%	20	
	Poor	4	22.2%	12	66.7%	2	11.1%	18	
	Total	95		37		13		145	

Source: Researcher (2024)

Table 10 reports the summary of mother's knowledge level within the tabulated summary level of mother's feeding practices. The result showed that 75.7% of the mothers with good knowledge level also had good feeding practices, 14.0% had moderate feeding practices while 10.3% had poor feeding practices. For the mothers with moderate level of knowledge, 50% had good feeding practices and the rest of 50% had moderate level. The mothers with poor knowledge, 22.2% had good feeding practices, 66.7% moderate and 11.1% had poor feeding practices. The analysis of mother's knowledge level within the tabulated feeding practices was found to be statistically significant $(\chi^2 = 31.86, p = 0.002)$since the p-value was less than 5%.

Table 11. Summary of level of Mother's attitude within the tabulated summary of Mother's feeding practices

		Mother's Feeding Practices							
		Good		Moderate		Poor		Total	χ^2 (p-value)
		N	%	N	%	N	%		
Mother's Attitude on CF	Positive	50	68.5%	21	28.8%	2	2.7%	73	20.01 (.001)
	Neutral	38	66.7%	8	14.0%	11	19.3%	57	
	Negative	7	46.7%	8	53.3%	0	0.0%	15	
	Total	95		37		13		145	

Source: Researcher (2024)

Table 11 reports the summary of mother's attitude level within the tabulated summary level of mother's feeding practices. The result showed that 68.5% of the mothers with positive attitude also had good feeding practices, 28.8% had moderate feeding practices while 2.7% had poor feeding practices. For the mothers with neutral attitude to CF, 66.7% had good feeding practices, 14.0% had moderate level while 19.3% had poor feeding practices. The mothers with negative feeding attitude, 46.7%had good feeding practices and 53.3% moderate feeding practices. The analysis of mother's knowledge level within the tabulated feeding practices was found to be statistically significant $(\chi^2 = 31.86, p = 0.002)$since the p-value was less than 5%.

Table 12: Relationship between mother background, knowledge, attitude and practices and timely initiation of CF

		Timely				
		Yes		No		χ^2
		N	%	N	%	$(p-value)$
Background Information						
Child Current Weight	Underweight	9	12.2%	3	18.8%	5.407
	Normal Weight	65	87.8%	12	75.0%	(.050)
	Overweight	0	0.0%	1	6.3%	
Mothers Ages	16-22 Years	17	23.3%	1	6.3%	16.748
	22-28 Years	23	31.5%	3	18.8%	(.002)
	28-34 Years	18	24.7%	3	18.8%	
	34-40 Years	14	19.2%	5	31.3%	
	Above 40 Years	1	1.4%	4	25.0%	
Marital status	Single	14	20.6%	0	0.0%	5.980
	Married	52	76.5%	14	87.5%	(.050)
	Separated	2	2.9%	2	12.5%	
	Widowed	0	0.0%	0	0.0%	
	Other	0	0.0%	0	0.0%	
Education Level	Illiterate	13	18.8%	6	40.0%	8.515
	Primary	38	55.1%	7	46.7%	(.002)
	Secondary	17	24.6%	2	13.3%	
	Intermediate	0	0.0%	0	0.0%	
	Graduated	1	1.4%	0	0.0%	
Mother's Knowledge on CF	Good	58	78.4%	11	68.8%	13.561
	Moderate	9	12.2%	1	6.3%	(.000)
	Poor	7	9.5%	4	25.0%	
Mother's Feeding Practice	Good Practices	57	79.2%	14	87.5%	.583
	Poor Practices	15	20.8%	2	12.5%	(.445)
Mother's Attitude on CF	Positive	47	64.4%	12	75.0%	1.385
	Neutral	21	28.8%	4	25.0%	(.500)
	Negative	5	6.8%	0	0.0%	

Source: Researcher (2024)

Table 12 shows the chi-square analysis of the relationship between mother's characteristics, knowledge on CF, attitudes towards CF and feeding practices on timely initiation of complementary feeding. Looking at the child's current weight, it is clear to see that a bigger portion (87.8%) with normal weight had timely initiation to complementary feeding. The results also showed that there is a positive and significant association ($\chi^2 = 5.407, p = 0.050$) between child's current weight and the timely initiation to CF. On the maternal age, the association was also significant ($\chi^2 = 16.748, p = 0.002$)indicating that the younger mothers were more likely to introduce the complementary foods on time as compared to the older mothers. Similarly, the marital status has a significant influence ($\chi^2 = 5.980, p = 0.050$) on the timeliness initiation to CF. Lastly, the education level of the mothers impacts significantly ($\chi^2 = 8.515, p = 0.002$) on the time that the CF is initiated.

Concerning the KAP characteristics of the mothers, the mother's knowledge was highly significant ($\chi^2 = 13.561, p = 0.000$) in determining the timely initiation of complementary feeding practices since the p-value was less than 5% threshold. However, mother's feeding practices ($\chi^2 = .583, p = 0.445$) and mother's attitude ($\chi^2 = 1.385, p = 0.500$) do not affect the time taken to initiate an infant to complementary foods.

Table 13: Relationship between mother's background, knowledge, attitude and practices and duration of breastfeeding

		Breastfeeding duration						
		Sufficient Duration		Moderate Duration		Insufficient Duration		χ^2
		N	%	N	%	N	%	$(p-value)$
Background Information								
Child Current Weight	Underweight	8	19.5%	2	6.7%	1	6.7%	6.78

		Breastfeeding duration						
		Sufficient Duration		Moderate Duration		Insufficient Duration		χ^2 $(p-value)$
		N	%	N	%	N	%	
	Normal Weight	33	80.5%	27	90.0%	14	93.3%	(.041)
	Overweight	0	0.0%	1	3.3%	0	0.0%	
Mothers ages	16-22 years	10	25.0%	6	20.0%	1	6.7%	12.19
	22-28 Years	9	22.5%	8	26.7%	9	60.0%	(.143)
	28-34 Years	11	27.5%	4	13.3%	3	20.0%	
	34-40 years	8	20.0%	10	33.3%	1	6.7%	
	Above 40 Years	2	5.0%	2	6.7%	1	6.7%	
Marital status	Single	4	10.5%	6	21.4%	4	28.6%	7.972
	Married	33	86.8%	20	71.4%	9	64.3%	(.010)
	Separated	1	2.6%	2	7.1%	1	7.1%	
	Widowed	0	0.0%	0	0.0%	0	0.0%	
	Other	0	0.0%	0	0.0%	0	0.0%	
Education Level	Illiterate	7	19.4%	9	30.0%	2	14.3%	4.01
	Primary	20	55.6%	14	46.7%	10	71.4%	(.676)
	Secondary	8	22.2%	7	23.3%	2	14.3%	
	Intermediate	0	0.0%	0	0.0%	0	0.0%	
	Graduated	1	2.8%	0	0.0%	0	0.0%	
Mother's Knowledge on CF	Good	30	73.2%	26	86.7%	10	66.7%	8.779
	Moderate	6	14.6%	2	6.7%	1	6.7%	(.012)
	Poor	5	12.2%	2	6.7%	4	26.7%	
Mother's Feeding Practice	Good Practices	32	78.0%	21	72.4%	15	100.0%	5.891
	Poor Practices	9	22.0%	8	27.6%	0	0.0%	(.038)
Mother's Attitude on CF	Positive	30	73.2%	19	65.5%	8	53.3%	3.525
	Neutral	11	26.8%	9	31.0%	4	26.7%	(.172)
	Negative	0	0.0%	1	3.4%	3	20.0%	

Source: Researcher (2024)

In Table 13, the researcher analyzed the association between mother's background information, knowledge of CF, attitude towards CF and feeding practices on the breastfeeding duration. Majority of the children reported with underweight (19.5%) were those who had more breastfeeding time possibly because mothers did not practice complementary feeding when appropriate, but rather stretched the exclusive breastfeeding duration. Further, the current child weight was found to be associated with the length of breastfeeding ($\chi^2 = 6.78, p = 0.041$)since the p-value was less than 5%. Similarly, marital status was significant ($\chi^2 = 7.972, p = 0.010$). However, maternal age ($\chi^2 = 12.19, p = 0.143$) and education level ($\chi^2 = 4.01, p = 0.676$) were statistically insignificant since the p-values were not less than 5%.

With regards to the basic factors, that is, the mother's knowledge on complementary feeding, mother's attitude towards complementary feeding and feeding practices, the findings showed different outcomes. Both mother's knowledge ($\chi^2 = 8.779, p = 0.012$) and mother's feeding practices ($\chi^2 = 5.891, p = 0.038$) were significantly associated with breastfeeding duration. This implied that mothers with adequate knowledge on CF would introduce the foods along the breast milk, increasing the breastfeeding duration. Similarly, mothers with healthy feeding practices will tend to have solid, semi solid and liquid foods alongside the breast milk. However, the mother's attitude ($\chi^2 = 3.525, p = 0.172$)was found to have no statistical significance when it comes to breastfeeding duration.

Table 14: Relationship between mother's background, knowledge, attitude and practices and Adequate dietary CF

		Adequate dietary						
		Adequate Dietary Intake		Moderate Dietary Intake		Inadequate Dietary Intake		χ^2 $(p-value$
		N	%	N	%	N	%	
Background Information								
Child Current Weight	Underweight	4	11.8%	2	7.1%	6	24.0%	4.888
	Normal Weight	29	85.3%	26	92.9%	19	76.0%	(.299)

		Adequate dietary						
		Adequate Dietary Intake		Moderate Dietary Intake		Inadequate Dietary Intake		χ^2 $(p-value$
		N	%	N	%	N	%	
	Overweight	1	2.9%	0	0.0%	0	0.0%	
Mothers Ages	16-22 Years	10	29.4%	6	21.4%	1	4.2%	11.728
	22-28 Years	12	35.3%	7	25.0%	7	29.2%	(.018)
	28-34 Years	6	17.6%	8	28.6%	5	20.8%	
	34-40 Years	4	11.8%	6	21.4%	9	37.5%	
	Above 4 Years	2	5.9%	1	3.6%	2	8.3%	
Marital status	Single	7	21.9%	3	11.5%	4	16.7%	7.954
	Married	23	71.9%	23	88.5%	19	79.2%	(.016)
	Separated	2	6.3%	0	0.0%	1	4.2%	
	Widowed	0	0.0%	0	0.0%	0	0.0%	
	Other	0	0.0%	0	0.0%	0	0.0%	
Education Level	Illiterate	4	12.9%	7	26.9%	7	29.2%	8.860
	Primary	19	61.3%	13	50.0%	12	50.0%	(.012)
	Secondary	8	25.8%	5	19.2%	5	20.8%	
	Intermediate	0	0.0%	0	0.0%	0	0.0%	
	Graduated	0	0.0%	1	3.8%	0	0.0%	
Mother's Knowledge on CF	Good	19	55.9%	22	78.6%	25	100.0%	5.180
	Moderate	7	20.6%	3	10.7%	0	0.0%	(.031)
	Poor	8	23.5%	3	10.7%	0	0.0%	
Mother's Feeding Practice	Good Practices	27	84.4%	22	78.6%	20	80.0%	.361
	Poor Practices	5	15.6%	6	21.4%	5	20.0%	(.835)
Mother's Attitude on CF	Positive	22	64.7%	19	67.9%	16	66.7%	8.409
	Neutral	9	26.5%	9	32.1%	6	25.0%	(.015)
	Negative	3	8.8%	0	0.0%	2	8.3%	

Source: Researcher (2024)

Table 14 reflects the analysis involving mother's background information, mother's KAP characteristics on the adequacy of the dietary intake among children aged 6-24 months. The findings showed that a bigger proportion of underweight children had inadequate dietary intake while majority with normal weight had moderate dietary intake. However, the overall chi-square ($\chi^2 = 4.888, p = 0.299$) analysis showed no statistical significance between child's current weight and dietary intake. For the maternal age ($\chi^2 = 11.728, p = 0.018$), marital status ($\chi^2 = 7.954, p = 0.016$) and education level ($\chi^2 = 8.869, p = 0.012$) of mothers had significant association on the dietary intake of the infants aged between 6-24 months. Moreover, mothers who were younger had small proportion (4.2%) of inadequate dietary intake among their children while those in ages 34-40 years had a bigger portion (37.5%) of the children with inadequate dietary intake.

In regard to mother's KAP (Knowledge, Attitude and Practices) characteristics on complementary feeding, the findings reported in Table 4.12 showed that knowledge and practices variables were statistically significant to the dietary intake for children aged 6-24 months, since their respective p-values were less than 5%. For mother's knowledge on CF, the chi-square ($\chi^2 = 5.180, p = 0.031$) analysis showed that the mothers with adequate knowledge about complementary feeding would help their children to have adequate dietary intake. For mother's feeding practice, the chi-square ($\chi^2 = 0.361, p = 0.835$) analysis showed that the mothers with feeding practices would not have any significance to their children having adequate dietary intake. Lastly, for mother's attitude towards CF, the chi-square ($\chi^2 = 8.409, p = 0.015$) analysis showed that the mothers with favorable towards complementary feeding would help their children to have adequate dietary intake.

DISCUSSION

This study was undertaken to assess the knowledge, attitudes and practices of complementary feeding among mothers of children aged between 6 and 24 months in Rulindo district, Rwanda. It was guided by three specific objectives, namely, i) to assess the knowledge of complementary feeding among mothers of children aged between 6 and 24 months in Rulindo district, ii) to explore attitudes of complementary feeding among mothers of children aged between 6 and 24 months in Rulindo district and iii) to determine practices of complementary feeding among mothers of children aged between 6 and 24 months in Rulindo district. Hence, the study revolved around three key variables such as, mother's knowledge on complementary feeding, mother's attitude towards CF and mother's feeding practices and how these influenced the CF practices in Rwanda.

The study found that there is a positive and significant association between child's current weight and the timely initiation to CF. Similarly, other mother' s background characteristics such as maternal age, marital status and education level impacts significantly on the child's timely initiation to CF and their health. Mother's knowledge on CF also influences the timely initiation to CF but mother's feeding practices and mother's attitude do not. This concurs with Mutuku, *et al.*, (2020) research which noted that maternal knowledge on complementary feeding significantly influence the health,

development and growth of the infant. Majority of the children reported as underweight were those who had more breastfeeding time possibly because mothers did not practice complementary feeding when appropriate. Both the marital status and mother's feeding practices were significant to breastfeeding duration. However, the mother's attitudes have no statistical significance when it comes to breastfeeding duration. No statistical significance between child's current weight and dietary intake. On the other hand, maternal age, marital status and education level of mothers had significant association on the dietary intake of the infants aged between 6-24 months. In addition, knowledge and practices variables were statistically significant to the dietary intake for children aged 6-24 months.

These findings concur with findings reported in previous studies. Mutuku, *et al.*, (2020) noted that maternal knowledge on complementary feeding significantly influence the health, development and growth of the infant. Ogbo, *et al.*, (2018) also observed that knowledge is important in determining the timing of complementary feeding and that appropriate timing helps the infant meet the needed additional nutrition. Lawrence and Lawrence (2021), point out that educating and training young mother on enhanced eating practices is an additional important component in CF while Habibi, *et al.*, (2018) reported a significant relationship between EBF and mother's education and socioeconomic status. Shrestha, *et al.*, (2020) results showed that 60.4% of the mothers knew the need for immediate initiation of BF after birth. Kimiywe and Chege (2015) point that the timing of CF and child's dietary diversity were significant predictors of wasting among children while maternal knowledge and BF duration influenced the child weight. Mollay, *et al.*, (2021) acknowledged the negative contribution of inappropriate CF of infants in the age of 6-24 months such as undernutrition and illness. Based on these findings, the KAP characteristics of mothers/caregivers of children aged 6-24 months have significant effect on the health status of their children and of a nation at large.

CONCLUSION

The study concludes that mother's or the primary caregiver's knowledge on breast feeding and complementary feeding plays key role in the CF practices. IT also contributes significantly to the dietary intake, health of the child and the overall health of the nation. However, the information out there is inadequate and more needs to be done to train, educate and equip the young mothers with sufficient knowledge. Moreover, the study has shown varying malpractices and negative attitudes among young mothers. These are usually influenced by the poverty level of the mothers, their cultural inclinations and their responsibilities to feed the young ones. With unhealthy feeding practices and negative attitudes, adequate dietary intake, the frequency of intake and other important feeding practices cannot succeed. It is imperative for the government, non-governmental organizations, public health workers, health centers and the community at large to work together to improve the young mother's knowledge, attitudes and feeding practices for a better and healthy nation. Empowering young mothers with these necessary feeding skills, is empowering the whole generation.

Recommendations

Based on the study findings, the researcher recommends establishing a comprehensive program to train young mothers in feeding practices and life skills. Direct interventions from government, NGOs, and churches are also needed to enhance family incomes and food supply, as inadequate food hampers effective breastfeeding and complementary feeding practices. Efforts should focus on improving the socioeconomic status of poor households, particularly in rural areas like Rulindo. Additionally, health workers should address gaps and challenges to develop evidence-based strategies that promote optimal infant nutrition, considering the needs and opinions of beneficiaries. The study provides insights into better practices for complementary breastfeeding, and emphasizes the need for mothers and caregivers to be dedicated to providing nutritious food, extending this responsibility to the wider community.

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