

# Factors Associated towards Mothers Practicing Acceptable Diet of 6-23 Months Old Children in Gimbichu Woreda, Oromia Regional State, Ethiopia

Techane Sisay Tuji\* and Addisu Dabi Wake

Department of Nursing, Arsi University, Asella, Ethiopia

## Abstract

The infant young child feeding model of World Health Organization (WHO) suggests introducing complementary food for new born babies starting at the sixth month. Breast milk has to be round out by any other foods to fill the nutrient demand of the child. These complementary foods are required to fill the calorie, protein, and micronutrient gap between the total nutritional need of the child and the amount contributed by the breast milk. Sufficient complementary food has to be diversified and prepared from different food groups in a solid or semisolid form and needs to be commenced timely from the sixth month of the child's age by implementing the quality of foods consumed as the child get older.

**Keywords:** Feeding model • Complementary food • Demand • Consumed

## Introduction

Inadequate complementary feeding of children at the age of 6 months-23 months tender to the characteristics negative growth trends and deaths detected in developing countries. Recent evidences have shown that promotion of adequate complementary feeding practices decreases the incidence of stunting and leads to better health and growth outcome. This study shows the assessing practices of complementary feeding and associated factors among mothers of children at the age of 6 months-23 months [1-5].

## Literature Review

### Minimum acceptable diet

In the sphere, MAD is considered as the amid eight core indicators of IYCF and identified as important a package to tackle childhood under-nutrition as a result of suboptimal complimentary feeding. This study was conducted mainly to answer the level of knowledge, practice of MAD, and its associated factors among infants and children residing in Gimbichu district east shoa, zone Oromia regional state, Ethiopia. The proportion of minimum acceptable diet was 30.1% (95% CI: 26.7, 33.1%), depicting presence of poor complimentary feeding, MAD. It was consistent with study conducted in Nepal (32.5%), in north rural Ghana (27.8%). This finding is lower as compared to study conducted in South-East Asian countries; Indonesia (58.2%), and Cambodia (47.7%), Java Province Indonesia

(47.7%). The variation might be due to educational background among study participants, in which the percentage of mothers who had achieved secondary and higher education in Indonesian and Cambodian studies was given in a 68.2% and 36.2%, respectively. Nevertheless, only 18.2% of mothers achieved secondary and higher education in this study. As it's evidenced in the current and previous studies, education plays a crucial role in improving infant and child feeding practice. Definitely, the socioeconomic difference and cultural practice on food availability and food consumption pattern make a variation. Similarly, the result of this study also lower when compared to study done in Dares Salaam, Tanzania (38.4%). Tanzania's study was conducted among children who had been come to seek healthcare in that mothers/caregivers who attended child health services in institutions are fortunate in receiving feeding counseling.

This implies that women who visit health institution are luckier in receiving child nutrition apart from targeting on the treatment for their sick child than their counter parts. Thus, extending nutritional care beyond treating the main problem could prevent under nutrition associated with inappropriate feeding. Furthermore, this study is lower than studies conducted in Kenya revealed that show (87.8%) vs. (51.9%) of children have met the MAD among intervention and control group respectively. In Kenyan study, it was an interventional, which could heighten their practice. In other words, the study was reported after delivering nutrition education to the participants. It's absolutely known that education is an important tool that could bring positively impacts one's knowledge, attitude and practice in every

\*Address for Correspondence: Techane Sisay Tuji, Department of Nusring, Arsi University, Asella, Ethiopia; E-mail: tachansisay@gmail.com

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aspect. Therefore, this shows that adopting such a best practice might be helpful in mitigating childhood inappropriate feeding and undernutrition as a result. In addition, the present study is lower than other studies conducted in Isiolo country, Kenya following discharge from supplementary feeding program (48.5%). The possible reason is the difference of study setting in which the Kenyan's study was conducted at institution on participants under nutritional supplement and also besides to this could be educational program about the nutrition that could take place by far [6-8].

Furthermore, this study is lower than studies conducted in rural areas of Moramanga and Morondava districts, Madagascar (50%) of children in both sites had a received minimum acceptable diet. This finding also lower than study conducted in Aligarh, Uttar Pradesh 35.6%. This variation may be due to socio-cultural belief, geographical area and climate, and availability and accessibility food items that make the differences. On other hand, the finding of this study was higher than study conducted in urban Zambia 26%, in rural Bangladesh at 16%, in South Africa who met less than 25%. In Sissala east district, Ghana (20.0%). In addition, this finding is higher than study conducted in urban Zambia 10% at age of six months and 21% at age of 12 months and study conducted in Dembecha 8.6%, in northern and western regions of India 9.2%. Similarly this study is higher than study conducted in Akpabuyo Local Area, Nigeria (7.3%). The possible explanation for the differences among these studies might be due to variation in study settings, different socio-cultural belief, all of which might be inhibit child feeding practices, knowledge on infants and young child feeding practice, availability and accessibility food items (production of diversity food difference)[9-13].

The odds of receiving acceptable diet among mothers' who had good knowledge was 8.46 times (AOR=8.46, 95%CI; (3.81,11.80)) more as compared to counterparts. In fact, having good knowledge about child feeding can improve provision of recommended acceptable diet in terms of both frequency and diversity as they might be aware of what their children will face if they don't feed them appropriately. The likelihood of getting recommended acceptable diet among children and infants whose mothers involved on household decision was five (AOR=5.10, 95%CI; (2.47,10.52)) higher as compared to not involved on the decision. This study supported by study conducted in Dembecha. The possible justification could be that women involvement is an important strategy that might allow mothers/caregivers in household issue to easily decide on type of food needed for children. The WHO has stated that women empowerment is an important strategy in reducing childhood undernutrition due to poor intake. The chance of receiving minimum acceptable diet among the mothers whose attending secondary and above educational level was nearly three times (AOR=2.78, 95%CI (1.12,6.89)) higher than those unable to read and write. This study supported by study conducted in Dembecha. In fact, as the level of education increases the knowledge of mothers about what and how to child feeding would be good. To clarify, these segments of population are chanceful in reading and gathering information regarding nutrition from any sources that could promote child feeding. The odds of gaining acceptable diet among husbands whose involving in infants and child feeding was 5.75 times than its counterpart. It is known that, in Ethiopia, the head of the household mainly are husbands so if husbands involved in child feeding, children are likely to receive wide range of diets, as their fathers might

might offer money and other important things to their mothers/caregivers in order to have the necessary food. In addition, the probability of getting acceptable diet among mothers whose attending ANC and PNC was almost four times given (AOR=3.86, 95%CI (1.99,14.94)) and nearly seven times (AOR=6.45, 95%CI (1.71,13.33)) more than its counterpart, respectively. One of the packages of Antenatal care and postnatal care is infant feeding and healthcare professionals usually advise them to feed their babies appropriately.

Therefore, postnatal care is crucial not only in treating maternal and neonatal health illnesses, but also it improves infant's nutrition. Similarly, the odds of gaining MAD among mothers who's the wealth index ranked at richest category was almost three times (AOR=3.24, 95%CI (1.24,8.45)) greater than the poorest family. The possible reason could be that having enough income supports them to afford the availability and accessibility of diet and the expenses of materials which could be the source of information such as TV, newspapers, magazine, radio, books, nutritional guidelines. In fact, these could have the potential to improve their level of knowledge about the acceptable diet [14,15].

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## Discussion

Finally, the accomplishment of this study is not without limitation. Even though we try to minimize recall bias and social desirability bias, it may not be free from recall bias and social desirability bias. There is a single study conducted on MAD in Ethiopia, which is even with a different population segment, and missed major variables (husband decision on child feeding, ANC, PNC and wealth index). Also, there is scarcity of literatures to discuss factors associated with MAD. Even the studies that reported the proportion of MAD were determined minimum acceptable diet practice when they studied minimum dietary diversity and minimum meal frequency practiced. However, hopefully this study could minimize such problem being a baseline for other researchers who will be willing to undertake the same study.

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## Conclusion

The proportion of MAD practice by infants and children of the study area was low. Mothers' secondary and above educational level, mothers attending PNC, mothers' who had good knowledge on infant feeding, mothers' involvement on feeding, mothers whose attending ANC, wealth index and husband's involvement were factors positively associated with MAD.

Further, this study provides significant information for the support of less than five children health and preventive intervention to this population residing in the study area in Ethiopia. It also offers a cornerstone to encourage health care providers to consider minimum acceptable diet and to support them to focus on and plan the methods to address this problem. Finally, we recommend mother's involvement on decision making and promoting husband involvement on infant and child feeding and also health care providers should improve the mothers' knowledge by creating the health education program particularly during ANC, PNC service utilization and community mobilization by far regarding minimum acceptable diet.

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## Authors' contributions statement

Techane ST and Addisu DW conceived the study and wrote the manuscript. Both authors analyzed and interpreted the data, critically revised and edited the manuscript. Finally, both authors have reviewed and approved last version of the manuscript.

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## Availability of data and materials

The data used to support the findings of this study are on the hands of the corresponding author.

## Ethics approval and consent to participate

The studies involving human participants were reviewed and approved by Institutional Review Board committee of the University of Gondar. Written informed consent from the participants of the study were not required in accordance with local legislation and national guidelines. However, we got the oral informed consent from the study participants.

## Consent for publication

Not applicable for this study.

## Competing interests

The authors declare that there is no any conflict of interest.

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