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A Report

By

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PROJECT REPORT

A Closer Look (ACL Study) - on the multidimensional modifiers of nutritional practices in children of rural Bihar- A qualitative deep dive using ethnographic techniques.

Purna Bhattacharya, Mimansha and Dr Tulika Rajan

Introduction

Proper nutrition during early years of childhood is very essential for proper growth and development of child. Inadequate nutrition during early years of childhood can hamper the growth of the child and can also lead to morbidity and mortality.(1) Child undernutrition is one of the major health concerns in developing countries. The 1st 1000 days of any childbirth is very essential for its physical and mental development and immunity of the body.(2) Undernutrition results in stunting, wasting, and being underweight. This also leads to higher child mortality and morbidity. Children aged two years and below are particularly vulnerable, due to their greater need for energy and nutrient-rich foods to support proper development of the body.

The National Family Health Survey 5 (NHFS-5) (2019 in India, discovered that 27.3% of urban children under the age of 5 were underweight and 30.1% were stunted. Children living in informal settlements or slums experiencing higher rates of malnutrition than those living in other urban areas.

World Health Organization (WHO) and Global nutrition target (GNT) sets goals to reduce the number of stunted children by 40% and increase the Exclusive Breastfeeding (EBF) rate globally at least 50% and reduce childhood wasting less than 5% by 2025. However, there are conflicting reports on how many Low Middle-Income Countries (LMICs) are on track to meet the WHO GNT set goals.(3)

Infant and young child and feeding (IYCF) is a major indicator of nutritional status of child.(1) Various factors that have been identified, which influences complementary feeding practices in LMICs, are caregivers' socioeconomic status, mothers' beliefs, knowledge of complementary feeding guidelines, influence of post-natal care and lack of decision-making power in the household.(4) The IYCF practices in LMICs are less than optimal. (1)

Breastfeeding has been evidenced to be the foremost optimum nutrition for infants. This can be because of immunological, secretion and growth benefits that play a protecting and optimum nutrition for a baby, immunological protection is provided by antibodies within the breast milk which might promote fast recovery from sickness. Breast feeding give nutrition until an exact age at that purpose the infants' diet needs the addition of solid food. It then becomes necessary to extend the nutrient intake to confirm optimum growth and development.(5)

Suboptimal IYCF practices plays a significant role in the high prevalence of chronic malnutrition. Due to the high risk of growth hampering infants between the age of 6 to 18 months are in a critical growth period, as this is the age when complementary food becomes the most important part of the diet. For the first six months, infants are recommended an exclusive breastfeeding. However, breastmilk is no longer sufficient to meet the infant's nutrient requirements at 6 months of age and further up to 2 years. Therefore, WHO recommends the introduction of adequate complementary foods at 6 months, with continued breastfeeding until the child is at least 24 months.(4) Based on research done in Democratic Republic of Congo (DRC), only 48% of children are breastfed within the first hour of birth, they miss out on the nutritional and immunological benefits of colostrum. Only 36% of children are breastfed exclusively for the first 6 months.(6) Young mothers are less likely to initiate breastfeeding and more likely to discontinue exclusive breastfeeding before the desired duration. They breastfeed their child for a shorter duration when compared with their older counterparts. Young mothers have different challenges and are vulnerable that make them different from other mothers, which result in specific concerns about breastfeeding practices.(7)

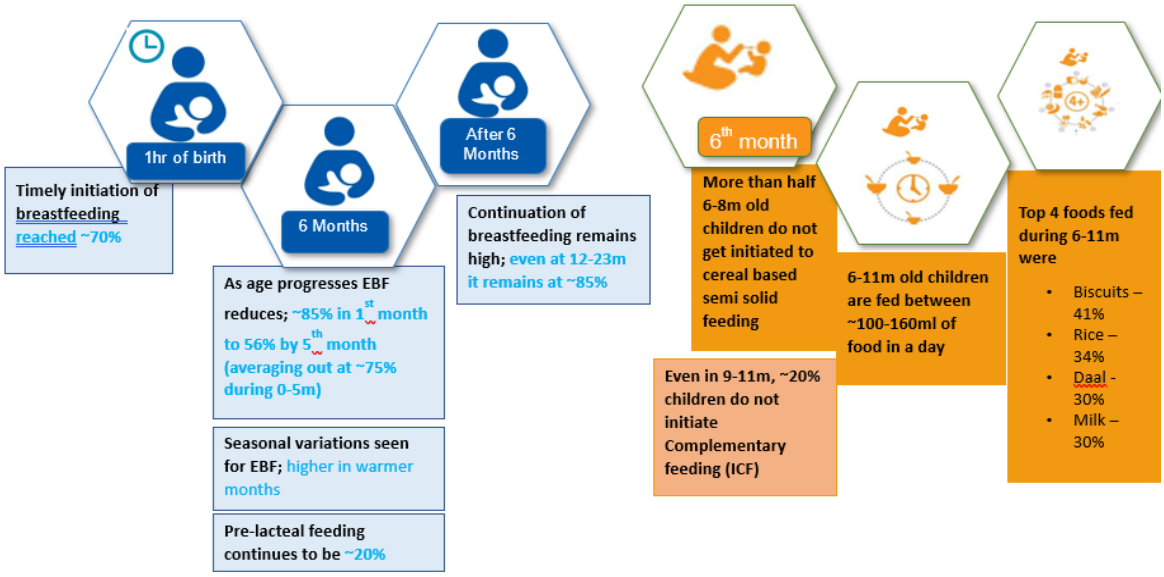
We need to remove the knowledge gap to understand the contexts of IYCF Programme, so that we can develop effective strategies to improve children's nutrition, particularly in resource-poor settings.

Based on NFHS 5 (2019-21), in Bihar 31.1 percent children under age 3 years are breastfed within one hour of birth, 58.9 children under 6 months EBF, 39% children 6-8 months receiving solid or semi-solid food and breastmilk, 10.8% breast-feeding children aged 6-23 months receive an adequate diet whereas 10.9% non-breastfeeding children aged 6-23 months receive an adequate diet. All remained below national average. Also, 42.9% children under 5 years who are stunted (height-for-age), 22.9% children under 5 years who are wasted, 41% children under 5 years who are underweight.(8)

According to WHO, (9) 8 indicators of Infant and young child feeding (IYCF) are

1. Early initiation of breastfeeding
2. Exclusive breastfeeding for six months
3. Continued breastfeeding for 12-23 months
4. Introduction of solid, semi-solid or soft foods
5. Minimum dietary diversity
6. Minimum meal frequency
7. Minimum acceptable diet and
8. Consumption of iron-rich and iron fortified foods

According to WHO, the new-born should be breastfed within 1 hour of birth. Early initiation of breastfeeding provides lots of benefits to the child as well as the mother. EBF should be followed for infants until they are 6 months old. No other food or drink, not even water should be provided to the infant below 6 months. Continuation of breastfeeding till 2 years of age is recommended by WHO, as it can prevent illness caused to infants and reduce half of deaths occurring between 6-23 months old children. Introduction of complimentary foods while continuing to breastfeed should be initiated at 6 months. Introducing semi-solid, soft foods and solid food after 6 months can lower the risk of children being stunted and underweight. A child should be fed diverse and variety of diets to ensure that nutrient needs are met. There are 8 (7+1) core food group for IYC diet including grain, roots and tubers, pulses and nuts, eggs, dairy products, flesh foods, vitamin a rich fruits and vegetables, other fruits, and vegetables and 1 breastmilk. Children between age 6-23 months should at least consume 5 out of 8 food groups. WHO suggests that the minimum meal frequency for breasted infants between 6-8 months old should be fed twice a day (semi-solid, solid or soft foods), breastfed children between 9-23 months old should be fed thrice a day and non-breastfed children between 6-23 month s should be fed 4 times a day.



According to current knowledge based on Community household Survey done by BTSU CISSD, the IYCF practices in Bihar (2014-2020), the data reveals that there were 70% timely initiation of breastfeeding within 1 hour of birth. As the age of the infant progresses the exclusive breastfeeding practice decreases, in 1st month it was 85% to 56% in 5th month, which averages out to be 75% for 0-5 months. Seasonal variation for EBF was seen, which was higher in warmer months. Pre-lacteal feeding i.e., any food given to new-born before initiating breastfeeding. 85% mothers continued to breastfeed their child of 12-23 months old. More than half 6-8 months old children are not fed cereal based semi-solid food. Even for children between 9-11 months old, 20% children are not initiated with complimentary feeding. In an average 100-160ml food is being fed to the child between 6-11 months. The top core food items mostly fed to the child were biscuits, rice, dal and milk.

To understand we did ethnographical observation in two blocks near Patna district in Bihar. The primary goal of this study was to assess the underlying barriers and facilitators for caregivers to implement recommended infant and toddler feeding practises using qualitative methods. To address the gaps and challenges of IYCF, we focused on three main practices which are required to improve the nutrition of children since birth up to two years of age:

(a) Continued breastfeeding or feeding with appropriate calcium-rich foods if not breastfed.
(b) Feeding of solid, semisolid, or soft food for a minimum number of times per day (minimum meal frequency) depending on age and breastfeeding status.
(c) Inclusion of a minimum of three food groups (dietary diversity) per day depending on breastfeeding status.(10)

Data on household socio-demographic characteristics, reproductive health outcomes, child health outcomes including vaccination and management of common child illnesses, infant and young child feeding practises, activities that promote play, learning, and school readiness, and childcare and protection practice were collected during the ethnographic observations.

Review of Literature

1. Eric A Hodges, Susan L. Johnson, et al in a study on Development of the Responsiveness to Child Feeding Cues Scale (RCFCS) (11) found that feeding responsiveness dimensions were linked to demographics such as maternal education, body mass index (BMI), child age and breastfeeding duration and self-feeding. The RCFCS includes a wide range of feeding cues, which can provide more insight into the development and diversity of feeding cues from birth to toddlerhood. With calls to pay more attention to child feeding cues as a means of preventing childhood obesity (Committee on Obesity Prevention Policies for Young Children, 2011), the ability to assess responsiveness as an interactive dynamic construct has implications for tailoring potential interventions to behaviour that occurs at different points during feeding.
2. Using Ethnography techniques, Margaret Armar-Klemesu, et al, in a study done to identify barriers and facilitators to optimal infant and young child feeding in rural Ghana: Implications for Programs,(12) evaluated that complementary feeding in these rural settings can be improved through reinforcement or modification of strategic components of local health and nutrition education in light of existing barriers and enablers to optimal IYCF . This study tells that a holistic view of caregiver's beliefs and practises regarding IYCF with insights into how this could be improved within the current context of IYCF. Complimentary feeding practices can be improved by modification of local and surrounding health and nutrition education.
3. Priyanka Athavale, et al in a qualitative assessment of barriers and facilitators to implementing recommended infant nutrition practices in Mumbai, India (10) found that nutrition interventions should prioritize standard messaging across healthcare providers, engage all family members, target prevention of early introduction of sugary and non-nutritious processed foods, and strengthen maternal self-efficacy for following IYCF recommended guidelines
4. Jennifer Burns, et al in a qualitative Analysis of barriers and facilitators to Optimal Breastfeeding and Complementary Feeding Practices in South Kivu, Democratic Republic of Congo(6) found that facilitators of optimal practises, health provider guidance and mothers' motivation to breastfeed and feed nutrient-dense foods emerged. The study concludes that in addition to food access, nutrition education, and behaviour change, interventions to address child nutrition and improve IYCF practises should consider these factors.
5. DK Collison in a study done on acceptability and utility of an innovative feeding toolkit to improve maternal and child dietary practices in Bihar, India (13) found that an innovative feeding toolkit consisting of a marked bowl, slotted spoon, and accompanying pictorial counselling card is highly acceptable and can be used at

home by families to improve dietary practises of pregnant and postpartum women, as well as the quantity and quality of feeding of their young children. This study conclude that demonstrated the potential of a single, simple-to-use toolkit as an acceptable intervention to increase dietary intakes of women during pregnancy and lactation and of children during complementary feeding, potentially improving the nutritional status of both mothers and children.

6. Nakachew Mekonnen, et al conducted a qualitative study on barriers and facilitators of child-feeding practice in a small sample of individuals from Gozamin District, Northwes,t of Ethiopia (2), found that almost every woman breastfeeds her child. Breastfeeding is one of the most effective ways to ensure the health and survival of a child. This study concludes that the main issue in the study area was child dietary diversity and complementary food preparation.
7. Jeanine Ahishakiye, et al in a qualitative, longitudinal study on exploration of coping strategies and factors facilitating infant and young child feeding practices among mothers in rural Rwanda,(14) found that Mothers made great efforts to adhere to the recommended IYCF practises despite the presence of challenges. Mothers managed to follow the recommended breastfeeding and complementary feeding practises in difficult contexts by combining active coping strategies, a sense of control, and social support. Nutrition promotion interventions aimed at improving IYCF should be taken in account mothers' ability to gain greater control over their IYCF practises, as well as the factors that facilitate their appropriate IYCF practises.
8. Dyah Ayu Inayati, et al in a retrospective study on Infant feeding practices among mildly wasted children: a retrospective study on Nias Island, Indonesia,(15) found that more than half of the mothers (52%) started breastfeeding within the first hour after giving birth. This study concludes that it is critical to improve the counselling skills of community workers and other breastfeeding campaign actors in the study area to promote breastfeeding practises.
9. Zohra S. Lassi, et al in a systematic Review on impact of Infant and Young Child Feeding (IYCF) Nutrition Interventions on Breastfeeding Practices, Growth and Mortality in Low- and Middle-Income Countries, (5) found that 66% increase in early initiation of breastfeeding in studies conducted in LMICs.
10. Mansi Vijaybhai Dhami, et al in a systematic review on understanding the enablers and barriers to appropriate Infants and Young Child Feeding Practices in India,(3) concluded that there is a need for a multi-sectorial strategy that hinges on both facilityand community-based approaches at the sub-national and national levels to improve IYCF practice in India.
11. Stephen Kofi Anin, Mahama Saaka, et al in study conducted on association between Infant and Young Child Feeding (IYCF) Indicators and the Nutritional Status of Children (6–23 Months) in Northern Ghana,(16) revealed the prevalence of the CF-related IYCF indicators estimated in the Northern Region of Ghana were relatively higher compared to the national and northern regional findings of the GDHS 2014. The prevalence of stunting remained unchanged compared to the GDHS 2014 findings, but the levels of wasting and underweight showed increase, despite improvements in the prevalence of the CF-related WHO/UNICEF core IYCF indicators.
12. Tuan T. Nguyen, Nemat Hajeebhoy, et. al in a study on Community support model on breastfeeding and complementary feeding practices in remote areas in Vietnam, (17)

found that the IYCF support group also helped to improve early initiation of breastfeeding.

13. Mansi Vijaybhai Dhami, Felix Akpojene Ogbo et. Al. in a study on Infant and Young Child Feeding Practices among Adolescent Mothers and Associated Factors in India, (7) found the Infant and Young Child Feeding Practices among Adolescent Mothers and Associated Factors in India.
14. Durga Madhab Satapathy, et. Al. conducted a study on Effect of Feeding Practices on Nutritional Status of Infant and Young Children Residing in Urban Slums of Berhampur, (18) was done to analyse the proportion of EBF in the urban slums of the Tripura district was similar to our study, i.e., 60.5%.
15. Kinjal H. Solanki, et. Al. (2022) conducted a cross-sectional study on community support model on breastfeeding and complementary feeding practices in remote areas in Vietnam: implementation, cost, and effectiveness,(19) which found that Minimum dietary diversity (MDD) was found to be a protective factor against stunting, Height and age Z score (HAZ) and underweight Weight for length Z-score (WAZ) and malnourishment as per mid upper arm circumference among children.
16. Apurba Sinhababu, et. Al. in a study on Infant and Young Child-feeding Practices in Bankura District, West Bengal, (20) found that when prolonged breastfeeding was accompanied with complementary solid foods, there was a reduction in clinical malnutrition.
17. Amanda Zongrone, Kate Winskell, et. al. conducted a study on Infant and young child feeding practices and child undernutrition in Bangladesh,(21) that showed adequate dietary diversity to be the indicator most strongly associated with better nutrition outcomes during this period. Other studies that have used a variety of indicators aimed at capturing food variety or dietary diversity have come to similar conclusions about the importance of the diversity of young children's diets.
18. Gretel H Pelto, Margaret Armar-Klemesu on an ethnographic study done for Balancing health, cost and convenience in feeding infants and young child in Accra, (22)revealed that commercially produced foods like ready to cereals are considered more nutritious than traditional homemade foods and it is also associated with the taste and child's acceptance.
19. Faith M Thuita, Gretel H pelto, et al conducted a focus ethnographic study on Is there a "complimentary feeding cultural core" in rural Kenya? Results from ethnographic research in five counties,(23) which showed that due to financial issues and high price of food item, special foods are not generally purchased for IYC feeding. Food items that are prepared for the other family members are not fed to the child.
20. Maryse Umugwaneza in a study done on Factors influencing complimentary feeding practices in rural and semi-urban, Rwanda: a qualitative study,(4) revealed that good IYC feeding was influenced by caregivers knowledge about timely initiation of breastfeeding, exclusive breastfeeding and initiation of complimentary feeding. Poverty and Semi-solid form of feeding acted as one of barriers. Counselling programmes about nutrition and childcare acted as facilitators.

Aims and Objectives

For mothers/primary caregivers having children of 6-23 months old-

- To understand the individual as well as household level IYCF behaviors (barriers and facilitators of IYCF practice)
- To explore ethnographic factors pertaining to the quantity and variety of foods being fed to the child.

For Key informants (KII) including ASHA (Accredited Social health Activist)/ANMs (Auxiliary Nurse Midwifery) Anganwadi, Panchayati Raj Institutions (PRI) members and Self-help Groups (SHGs) (Jeevika)

- To understand individual and community level perceptions, norms, and behaviors of IYCF practices focusing on barriers.
- To explore ethnographic factors pertaining to the quantity and variety of foods being fed to the child.

Methodology

Study design: A mixed method study was done using a structured survey tool, in-depth interviews, photo documentation and ethnographic techniques like observation, cognitive mind mapping, free listing, and 24-hour dietary recall.

Study Setting: Study was conducted in the district of Patna in 2 blocks Daniyawan and Bikram. For better representation of the state and to gather better information, across the district, 4 villages were selected in which 3 were rural and 1 was peri urban. 6 beneficiaries (3 mothers/caregivers each with 6-11- and 12-23-months old child) and 4 KIIs (1 ASHA, 1 Anganwadi, 1 PRI member and 1 SHG) was selected.

Study population: Three different study populations were studied:

1. KIIs to mother/primary caregivers of children aged between 6-23 months old; ASHA, AWW, ANM, SHG and PRI.

2. Market vendors/food suppliers.
3. Two different subgroups of mother/primary caregivers
    a. Mothers/caregivers with children aged 6-11 months
    b. Mothers/caregivers with children aged 12-23 months

Sampling technique: A sample frame was derived from purposive sampling method of mothers with 6-23 months old children, a nested subsample across 4 villages was derived systematically for Patna district with peri-urban and rural representation according to operational feasibility and family consent. From each village market vendors, beneficiaries and 4 KIIs was selected purposively.

- KIIs (1 ASHA, 1 Anganwadi, 1 PRI member and 1 SHG) were interviewed for understanding overall understanding of CF related knowledge and practices, services/information they provide to beneficiaries/mothers/caregivers and their understanding regarding how caregivers/mother perceive complimentary feeding.
- 6 mothers/ primary caregivers (caregivers/mothers to 6-11 and 12-23-month-old children, 2 each] x 4 villages) were observed for a minimum of 3 days each, where in their routine activities was recorded in an observation checklist, dietary patterns and practices recorded using a survey tool, following which they were interviewed to capture their perceptions regarding complimentary feeding.

Data collection: The procedures adopted for this study was based on different studies conducted on IYCF practice analysis in other LMIC. After getting approval from the ethics committee, study was conducted among selected families. An informed consent was obtained from the respondents. The study was conducted in two phases. **Phase 1** included "Market mapping exercise" and "Interaction" with KIIs which gave an overview on availability of various foods, their prices and seasonal price changes using techniques like food free listing, photo documentation etc. In addition to this, the interaction with KIIs led to information pertaining to household level availability, general IYC practices relevant to the community and a "Cognitive mind mapping" exercise to try capturing some domains identified as barriers to CF from other previous studies.

Phase II involved "Interaction and observation" of mothers/caregivers in their daily household activities for a duration of 3 days and their IYCF practices. Mothers/caregivers interacted with investigators and participated in exercises like "Free listing" of IYC foods, problems faced

while IYC, “Cognitive mind mapping” for perceived benefits of certain foods, its cost effectiveness, child’s acceptability, and ease of acquisition

Total number of observations done of household	06
In-depth interviews of caregivers/mothers	06
In-depth interviews of ASHA- Daniyawan	03
In-depth interviews of ASHA- Bikram	02
In-depth interviews of AWW- Daniyawan	03
In-depth interviews of AWW- Bikram	01
In-depth interviews of PRI members- Daniyawan	01
In-depth interviews of PRI members- Bikram	01
In-depth interviews of SHG- Daniyawan	03
In-depth interviews of SHG- Bikram	01
Market Mapping in Daniyawan	07
Market Mapping in Bikram	09
TOTAL INTERVIEWS DONE	**43**

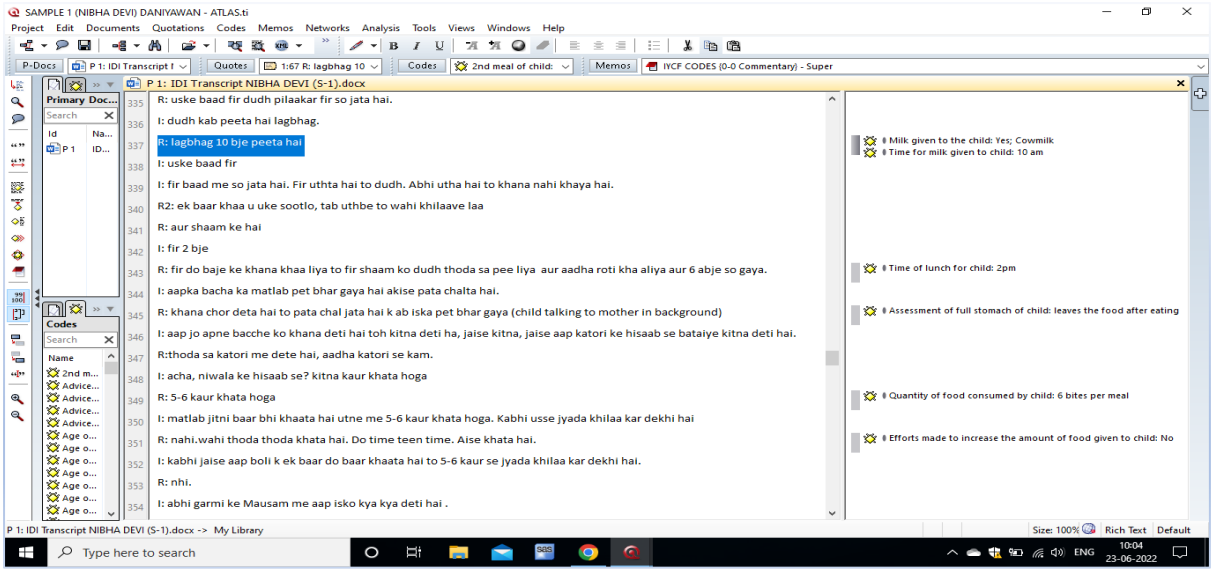
Information was collected under following domains:

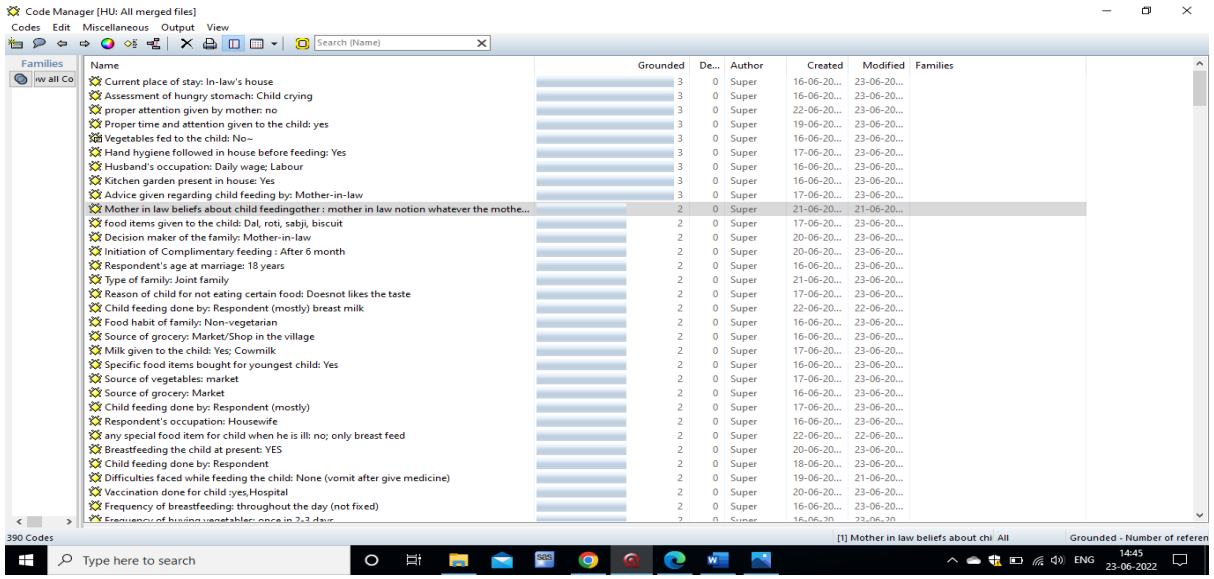
1. Demographic and socio-economic information (Age, caste, religion, education, occupation, wealth, state/town)
2. Market level availability, seasonality, and pricing of foods
3. Knowledge, practices, and perceptions related to complimentary feeding
4. Knowledge, practices, and perceptions related to Dietary diversity, frequency, and quantity.

Data management and analysis

All collated data including observation checklists, notes, pictures etc was primarily digitalized on daily basis. The preliminary findings and notes taken during observation/IDIs, and all corresponding audio transcripts were transcribed into text in MS Word. The transcribed documents were translated into English. The data generated by IDI and observations were then coded using ATLAS Ti. Code families, code dictionaries, themes and sub themes were prepared. Grounded theory-based coding of transcripts, cleaning, contextualization for

preparing the qualitative data for analysis. was done using ATLAS Ti. The analysis of quantitative data was done by using MS Excel.





Results

Family demographic characteristics:

Six in-depth interviews that was conducted, among which mothers had an average age of 25 years and 8 years of schooling. Most of the mothers lived in a joint family where the decision-making power belonged to the mother-in-law and were housewives. For most of the household, the respondent's husband worked as daily wage workers or labours.

Core food items for infants and young child:

Rice and wheat-based food items are predominant core foods in IYC diets. Based on in-depth interviews and cognitive mind mapping exercise, in most of the household it was found that the major food groups that were considered most important according to the mother for the child were (1) Dairy products, (2) grains, roots and tubers and (3) Legumes and nuts. Based on the 6-days observation, it corroborated with the IDI and cognitive mind mapping exercise and milk, rice, pulses, chapati, potato, soyabeans were considered nutritious and were fed to the child.

"dal, roti, sabji, bhaat, biscuit sab kuch khata hai".

Breastmilk was considered as one of the most important food group for the child till 2 years. In most of the households, animal proteins were considered nutritious but predominantly were not given to child**.**

"jaise ke meat machli ho gya, aur sab kuch ho gya, par khaayebe nahi karta hai to isko kya khilaayenge".

According to the observation, in most of the household food was not prepared specially for the child. It was observed that in most of the household outside foods like cerelac, horlicks and biscuit were fed and considered nutritious for the child.

Food preparation for infants and feeding practices:

Most of the household chores were done by the mothers. While performing those household chores, other members of the family helped in managing the child. The hygiene practices followed in the household were before cooking and feeding were optimal. Whereas in 50% of the household which was observed, practice of open defecation was seen. Rice, chapati vegetables are consumed on the daily basis. Non-vegetarian foods (eggs, fish and chicken) are consumed in most of the household and are consumed once in a week. In most of the

household the frequency of preparing meals were twice a day (morning and evening), food items prepared for the entire household, was fed to child. There was no fixed time or frequency for feeding the child. When the child cried, it was assumed that he/she is hungry was given food/breastmilk.

"Rota hai khub…hinhina ra hai"

Despite that, in 40% of the household, mothers made alternate efforts to feed the child by trying different food items and preparations whereas in remaining 60% not certain efforts were made.

Knowledge/perception, beliefs, and mother's practices

In many households, it was believed that children below 12 months should not be given certain food items e.g. non-vegetarian food items because he/she is a small kid and won't be able to digest it. For children between 6-11 months of age, it was believed that breastmilk is enough for the child**.**

"nahi isiliye nahi dete hai na ke sochte hai ke ye sab cheez se toh pet har hi jaa raha hai over cheez hum kaahe de. Yehi sochte hai."

According to mother-in-law of many respondents it was believed that whatever food that was consumed by mother will be transferred to the baby.

"Mummy kehti hai ki ma jo khati hai bacha ko wo lagti hai. Jab usko thand lagta hai toh haldi,dudh asb khati hu"

Many mothers believed that the child is less than 12 months, so he/she might have difficulty swallowing the food because of which they gave the food in liquid or grinded consistency.

Advice received from healthcare staffs for nutrition

Healthcare workers such as ASHA's performance regarding creating awareness about nutritional requirements of infants and young child and complimentary feeding was found to be satisfactory but it has also been observed that in some of the cases, they failed to maintain equilibrium among all sects of the society, in general and the caregivers. Frequent and regular home visits regarding to assess the feeding practices followed by the caregivers/mothers were found to be lacking in some villages.

Information received from other sources like media

In some of the household, the caregivers got the knowledge about child feeding practices through newspapers, magazines, TV advertisements, awareness programs at village levels.

"aise bhi to sab banter me likha rehta hai, chaahe allonce bhi karta rehta hai ki tv me add bhi batata rehta hai ke bacche ko 6 mahine ke baad hi kuch dena chahiye"

Family support

Mothers who had family support and positive and healthy relationship with their mother-in-law were found to have better childcare abilities. They tried to give the best care to their child while following some advice received from their mother-in-law. It was also noticed that mothers who would get help from their mother-in-law/other family members in managing their child while doing other household chores followed better complimentary feeding practices. While mothers who did not get any help from their family in managing the child, could not give proper time and attention to the child and lacked proper childcare abilities.

Challenges in feeding behaviour as child grows older

Introducing new food items to the child was always a challenge for most of the mothers especially introducing animal proteins to the child was an issue. As the child could not get acclimatize to its taste and would refuse to eat further. Increasing the quantity of food given to the child as the child grows older also was found to be problem, as the child would refuse to eat extra.

Barriers to optimal Infants practices

Women's workload of household chores was found to be a major barrier in 50% of the household. Because of workload, they could not give their child proper time and attention. Whereas in the remaining 50% household, because of family's support and joint family which helps in managing the child while the mother was doing household chores, it was not considered as a barrier.

Poor maternal dietary & insufficient breast milk- It was observed in some of the households, the mothers appeared lean and thin and weak, as well. Because of lack of spacing between children, mothers were not able to breastfeed the child for desired duration of time.

"khilana shuru kiye jab delivery patient hone lage. Okar baad, khilana shuru kiye ke mera dudh nahi pee sakta tha"

Lack of knowledge in feeding practices was found in majority of mothers which made them perform wrong complimentary practices like feeding only liquid consistency foods to child till 12 months of age, not feeding vegetables below child below 12 and not giving the child animal proteins. Knowledge gaps were found to be evident in majority of households.

Due to **financial resource constraints** in some of the households, lack purchasing power for different essential food items for the child was observed.

Discussion

The study reveals a multi-dimensional factor influencing complimentary feeding practice. This study also reveals positive elements of hand hygiene practice followed before cooking and feeding at household levels in villages. This study also showcased positive beliefs of mothers as well as the family members which might help in implementing improved interventions of nutritional and IYCF practices. This study has also brought out the fact that majority of the mothers were educated. Educated mothers bring their awareness through the acts which support the child to grow in a favourable atmosphere.

The mixed method study findings suggest that nutritional interventions can be supported by creating awareness among the mothers, caregivers, and other family members of the child by FLWs like ASHA. Nutrition-rich IYC diets and how existing food items in the house can also be fed to the child should be promoted by ASHAs.

Child 6-12 months of age are mostly fed liquid or semi-solid food items like cowmilk, dal ka pani, grinded rice, grinded roti and dal, as they can be easily swallowed by the child.

The present study has certain limitations like small sample size and less time for ethnography observation. But on the other hand, this study had various strengths like it was a mixed method study, what could not be captured in an IDI, was captured in 3-day observation like feeding practices followed at home. Through the cognitive mind mapping exercise, we could also test the knowledge of the mother. We took the sample from rural as well as peri-urban area which gave us a different perspective of people living in that area.

Conclusion

Narratives from the interviews, observations and other ethnographic techniques done suggests presence of complex barriers and influencers of nutritional practices in children. There are knowledge gaps at many stakeholder levels like beneficiaries (mothers/caregivers), FLW (ASHA and AWW), Market Vendors. Our data suggests that community health workers should emphasize on creating awareness about nutritional practices, do counselling of the mothers as well as the family members in facilitating mother and child health.

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