

FORMATIVE QUALITATIVE RESEARCH

on Complementary Feeding Practices in Pakistan



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Nutrition Wing
Ministry of National Health Services,
Regulations & Coordination
Government of Pakistan



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Formative Qualitative Research on Complementary Feeding Practices in Pakistan

National Report



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Acronyms

AJK	Azad Jammu and Kashmir
CF	Complementary Feeding
DFID	Department for International Development
FGD	Focus Group Discussion
GB	Gilgit Baltistan
ICT	Islamabad Capital Territory
IDI	In-Depth Interview
IYCF	Infant and Young Child Feeding
KAP	Knowledge, Attitudes and Practices
KII	Key Informant Interview
KP	Khyber Pakhtunkhwa
LHW	Lady Health Workers
MoNHSR&C	Ministry of National Health Services, Regulations and Coordination
NNS	National Nutrition Survey
OPM	Oxford Policy Management
ORS	Oral Rehydration Salts
PDHS	Pakistan Demographic and Health Survey
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation and Hygiene
WFP	World Food Programme
WHO	World Health Organization

Glossary

Cerelac	generically used term for packaged infant cereals
choori	small pieces of roti or paratha in ghee and sugar (Punjab)
daal	lentils
dakka	mixture of butter, honey, cardamom, and mint (Sindh)
dalia	porridge
dhoodh patti	sweet milky tea
dowdow	food made from flour and milk (GB)
firni	rice pudding
gajar ka halwa	halwa made of carrots
garam taseer	warming effect
gurh	jaggery
guthi	pre-lacteal feed (KP)
hakeem	traditional healer
halwa	sweetened food made of flour, egg or vegetables cooked in ghee
haram	forbidden in Islam
katcha	semi-permanent construction of unbaked bricks, adobe, etc
kheer	rice pudding
khichri	mixture of rice and lentils, often with meat, but existing in many variations
lassi	yoghurt or buttermilk drink

maash	white urad lentils
nimko	spicy packaged snack food made of fried wheat flour, gram flour, lentils, etc.
nimkol	oral rehydration salts
nisasta	liquid wheat-based halwa (KP, AJK)
papar	poppadum
paratha	flatbread, usually made of refined or unrefined wheat flour and oil
ration	typically referring to staple groceries such as flour, oil and sugar
roti	flatbread, usually made of refined or unrefined wheat flour
rusk	twice-baked biscuits, often eaten dipped in tea or milk
sagu daana	tapioca balls in milk
sattu	Balti food made of flour (GB)
shaffay	semolina cooked in apricot oil
suji halwa	semolina cooked in milk or water with sugar to form a liquid (KP tribal districts)
suji	semolina
taseer	effect of food on bodily humours in traditional medicine
thandi taseer	cooling effect
yakhni	clear broth



PREFACE

This report has been prepared by the Oxford Policy Management team comprising Sarah Javeed, Dr Abdul Bari, Tanya Lone, Nihan Rafique and Ibrahim Khan. It details the research methodology and findings of the formative qualitative research design on complementary feeding in Pakistan. We are grateful to the Ministry of National Health Services, Regulation and Coordination, UNICEF, the Nutrition Technical Committee and all respondents for taking the time to speak with us during our field visits.

We would like to give special thanks to Dr Saba Shuja of UNICEF for facilitating the research process and providing technical assistance.

We would like to thank all the members of the Technical Committee for their help, support, and hospitality throughout the research.



Disclaimer:

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FOREWORD

Appropriate feeding practices are essential for the nutritional status, growth, development and survival of infants and young children. Infants should be exclusively breastfed for the first six months of life, and thereafter receive nutritionally-adequate and safe complementary foods, while breastfeeding should continue up to at least two years of age. Poor or suboptimal breastfeeding practices are an important determinant of all forms of undernutrition, especially during the first 1,000 days of a child's life. It is recommended that babies should receive complementary foods from six months of age when they begin to require adequate nutritious foods in addition to breastmilk.

As part of the National Complementary Feeding Assessment, qualitative formative research was carried out to explore mothers' perceptions, understanding and practices around optimal feeding and the reasons for suboptimal breastfeeding practices, especially complementary feeding. A formative qualitative study with a focus on knowledge, attitude and practices regarding complementary feeding practices was conducted in selected divisions/districts of all four provinces and three regions to provide a countrywide picture of complementary feeding practices, behaviours and influencing factors.

This study gives an understanding as to who makes decisions with regard to child feeding/ breastfeeding in the household and helps us understand basic levels of knowledge in feeding practices, consumption patterns and practices surrounding food preparation. In addition, the study provides qualitative information on nutrition-sensitive practices such as household hygiene, water access and safe use. The information about use of social protection programmes, household food security and health status including immunizations and kangaroo care practices, are also explored in this research.

The Nutrition Wing of the Ministry of National Health Services, Regulation and Coordination highly appreciates the financial support from the United Kingdom Department for International Development in conducting this analysis and the efforts of Oxford Policy Management in carrying out the fieldwork. The role and contribution of different stakeholders and partners in carrying out the research, and later in reviewing and helping finalize the report, is highly appreciated. These include the provincial and regional departments of health, UN organizations (WHO, UNICEF, WFP), international and national organizations (NI, GAIN), and federal line ministries.

I would like to mention the hard work put in by Dr Saba Shuja (UNICEF) in completing the National Complementary Feeding Assessment successfully. Furthermore, I would like to thank Melanie Galvin, Dr Wisal Khan and Sumra Kureshi as well as my team at the Nutrition Wing, especially Dr Khawaja Masood Ahmed, for his inputs as well as for reviewing and finalizing the document.

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EXECUTIVE SUMMARY

Purpose

The purpose of this research is to understand the major trends in complementary feeding (CF) practices and to unpack the reasons behind prevalent infant and young child CF practices. The findings of the research will help identify and explore:

- The enablers and barriers in optimal feeding practices across the various segments of the country's population;
- The decision-making process in the household with regards to infant and young child food choices;
- Knowledge, attitude and practices in relation to complementary feeding practices of children aged 6–23 months; and
- The links of other factors, such as water, sanitation and hygiene (WASH), social protection programmes and food security to feeding practices and nutrition status.

The study was conducted at the national level, covering all administrative divisions of Pakistan, including both rural and urban areas.

Methodology

The research questions were answered through primary qualitative research and aimed to learn from all major key stakeholders at the local level, including mothers, fathers, caregivers, service providers and community leaders. Data collection was undertaken using key informant interviews, focus group discussions, and informal and formal observations from all groups.

Key findings

Responsibility for feeding the child rested with the mother; the father's role was directed towards providing the necessary food items.

Mothers and caregivers provided various reasons for whether they initiated complementary feeding at early or late stages of the baby's life, some of which were related to caregiving practices including poor knowledge and lack of economic resources. Some mothers continued breastfeeding for longer because it was safe, convenient and free of cost. The data indicate that the choice of first foods is made by selecting foods that are perceived as nutritionally dense, easy to digest, and that keep the child healthy, strong and satiated for longer periods of time.

The family financial situation also influenced the choice of food, and in many cases, children were given foods already available in the house. In the majority of cases, parents did not keep a separate household budget for the child's food.

Rather than considering dietary diversity in terms of food groups, mothers and caregivers perceived it more in terms of taste, such as sweet and salty foods. Certain foods were not consumed due to local beliefs about the effects of the food item. Mothers avoided giving "hot" or *garam taseer* foods in the summer as these were believed to be difficult to digest and to heat up the body, and preferred giving "cool" or *thandi taseer* foods instead. These properties refer to traditionally ascribed humours, rather than the temperature of the foods.

The most popular food group given to young children across the country was dairy, followed by grains, roots and tubers. Reasons cited for giving dairy included the ability of milk to meet nutrition needs, improve growth, strengthen bones, promote good health and sharpen the mind. The least consumed food group was fruits and vegetables rich in vitamin A. Mothers, caregivers and even service providers were not aware of vitamin A-rich food items and these were mostly given to children when they were incidentally cooked at home. Meat and fruits were limited in babies' diets due to high prices. In case of fruits and vegetables, priority was given to affordable and available items such as bananas and guavas. There was a high proportion of shelf food consumption across all regions despite their lack of nutritive value due to a child's preference.

It was found that most mothers fed children when they demanded food by showing signs of hunger. Mothers who practiced demand-based feeding relied on cues such as crying, trying to grab food or following the mother around and asking for food (verbally or non-verbally).

Barriers to adequate complementary feeding include economic limitations, poor caregiving practices, lack of information and insufficient knowledge, continuing breastfeeding practices, limited access to markets and restricted mobility of mothers.

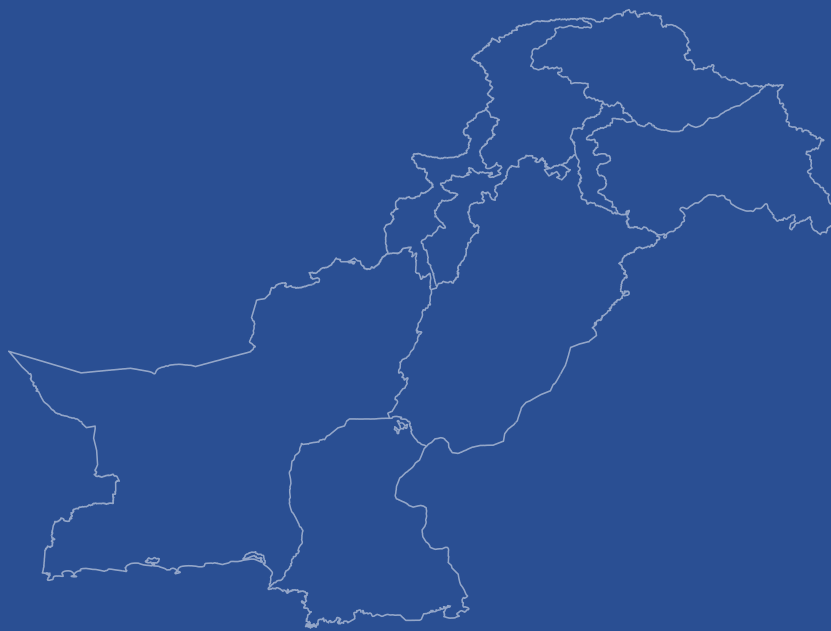
Enablers include sound economic conditions, supportive husbands who provided information, conscientious caregiving practices, joint family systems that provided support and social protection programmes like the Benazir Income Support Programme (BISP).

The linkage between WASH and complementary feeding was widely recognized and everyone emphasized the importance of clean utensils, handwashing and clean drinking water. However, the use of soap for handwashing was not mentioned specifically, perhaps indicating use of plain water for handwashing. Amongst those who received the BISP cash transfer, all agreed that the programme was a support for them and helped them in buying food rations as well as some foods which they otherwise could not afford such as fruits or meat products.

Recommendations

- Mothers and caregivers need to be provided with adequate information on age-appropriate CF practices.
- Participation of fathers needs to be enhanced in infant and young child feeding practices considering their crucial role as the main family providers who manage household groceries and food rations.
- Locally available and affordable nutritious foods need to be introduced to local communities including ways of preparing these foods that preserve their nutritious value.
- Trainings, support materials such as food charts and growth charts should be provided at both private and public sector health facilities and clinics to facilitate healthcare providers.
- Public campaigns should be conducted to discourage feeding shelf foods to young children and publicize other cost-effective and locally-available healthier food options.
- Lady Health Workers (LHWs) and community health workers should be engaged more proactively in promoting effective child nutrition and CF practices.
- Mothers and caregivers should be sensitized further on the importance of handwashing with soap and clean drinking water.
- An effective communication strategy with plan should be developed to address behavioural problems related to complementary feeding.





PAKISTAN

FORMATIVE RESEARCH ON
COMPLEMENTARY FEEDING
PRACTICES



1 INTRODUCTION

This research has been conducted by Oxford Policy Management (OPM), on behalf of the United Nations Children’s Fund (UNICEF) and the Ministry of National Health Services, Regulation and Coordination (MoNHSR&C), with financial support from the United Kingdom Department for International Development (DFID). The focus of the research is on complementary feeding (CF) practices and attitudes towards children aged 6–23 months. The research primarily intends to develop an understanding of the major trends in CF practices in various population segments of the country and to unpack the reasons behind prevalent infant and young child complementary feeding practices.

This research complements existing statistical findings on CF practices using the conventional qualitative approach of asking what, why, where, when and how to uncover the context and human aspects that lie behind the statistics, and to understand the factors that influence these behaviours and practices. The aim of the research is to develop a deeper understanding of the variations in the key research questions across provinces, localities (rural/ urban), education level, and economic status.

Researchers and policymakers have found infant and young child feeding to be context-specific. Breastfeeding and CF perceptions, understandings and practices all vary with geographical, cultural, and socioeconomic factors. Formative research is thus critical in understanding household and individual-level behaviours and decisions that determine these. Therefore, such research is crucial in developing programme strategies, particularly when it aims to influence behavioural change.

This research study occurs within the context of a high prevalence of acute and chronic malnutrition and micronutrient deficiencies among infant, young children and women of reproductive age in Pakistan. This high prevalence of malnutrition and micronutrient deficiencies is

to be linked to food insecurity, and subsequently to poor or suboptimal breastfeeding practices in infant and young children. The National Nutrition Survey (NNS) 2011 revealed that a total of 58 per cent of households in the country are food insecure, of which 19.8 per cent are food insecure with moderate hunger and 9.8 per cent are food insecure with severe hunger. Food insecurity is even worse in rural areas where 60.6 per cent of the households are food insecure compared to 52 per cent in urban areas. Rural areas have more households with food insecurity with moderate (20.7 per cent) and severe hunger (10.5 per cent), compared to urban areas where 17.7 per cent of households are food insecure with moderate and 8.2 per cent with severe hunger.

Sub-optimal infant and young child feeding practices are widely prevalent; this is particularly acute for CF practices. Predominant breastfeeding is common: 94 per cent of children are reported to be ever breastfed, and 38 per cent are exclusively breastfed (PDHS, 2013). Only 16 per cent of breastfed children in Pakistan receive minimum dietary diversity from four or more food groups and the minimum number of meals a day. The numbers are even worse for non-breastfed children (10 per cent). Pakistan falls below the average for South Asia, where minimum dietary diversity stands at 25 per cent of children aged 6–23 months and minimum acceptable diet at 18 per cent (UNICEF, 2015).

Understanding the setting and context in which this nutritional situation occurs was thus crucial in identifying the knowledge gaps that need to be filled by this formative research and in refining the research questions to ensure appropriate exploratory approaches were adopted for each key research question. Thus, the research design for this study has been developed after a thorough review of relevant literature on infant and young child feeding in Pakistan, allowing the team to focus on the most pertinent issues and knowledge gaps.

This formative research complements a series of research studies commissioned by UNICEF: the “In-depth analysis of complementary feeding indicators – Evidence from Pakistan Demographic and Health Survey 2012–2013” and “Infant and young child feeding behaviours in Pakistan – a gap analysis based on literature review”. The findings of this formative research will form a part of this series of studies.

2 PURPOSE, OBJECTIVES AND SCOPE OF RESEARCH

2.1 Purpose and objectives

Guided by the key objectives specified in the terms of reference, the findings of this research will help inform the identification and exploration of:

- Enablers and barriers in optimal feeding practices across various segments of the country;
- Decision-making processes in the household with regards to infant and young child food choices;
- Knowledge, attitude and practices in relation to CF practices for children aged 6–23 months; and
- The linkages of other factors, such as water, sanitation and hygiene (WASH), social protection programmes, and food security with feeding practices and nutrition status.

The key research questions are developed based on our understanding of the evaluation objectives' and further conversations with Technical Committee and Steering Committee members. The four key research questions were:

1. What are the key knowledge, attitude and practices in relation to CF practices amongst mothers and caregivers of children aged 6–23 months?
2. Who are the key decision-makers with regards to CF practices for children aged 6–23 months in the household?
3. What are the enablers and the barriers in relation to optimal feeding, especially CF practices?
4. What are some of the other key factors and nutrition-sensitive practices (such as WASH practices, food security, and social protection) that influence nutrition status and feeding practices?

2.2 Scope of the research

The geographic scope of the study covered Pakistan's four provinces; Balochistan, Khyber Pakhtunkhwa (KP), Punjab, and Sindh, in addition to Azad Jammu and Kashmir (AJK), Gilgit-Baltistan (GB), Islamabad Capital Territory (ICT) and the Federally Administered Tribal Areas which were subsequently merged into KP province to comprise the tribal districts of KP. The study was conducted at the national level, covering all administrative divisions of Pakistan, across the rural-urban divide.

Considering that this was a formative research on complementary feeding, which will inform the development of an effective and gender-responsive mother and child health and nutrition strategy, the research focused on the knowledge, attitudes and practices (KAP) of local communities and service providers. Respondents for this study were primary caregivers of infant and young children, including mothers, fathers, and other household caregivers such as grandmothers and older siblings. For triangulation purposes, the research also included community key informants and service providers, especially the frontline health workers, who usually provide information and services related to mother and child health. These service providers included Lady Health Workers (LHWs), Lady Health Visitors, traditional birth attendants and low-cost private doctors.

It is important to note that this study did not cover provincial or federal policymakers and therefore will not directly offer policy-level recommendations. These can be explored in a future study.

3 RESEARCH METHODOLOGY

The research methodology was guided through a detailed research matrix based on the World Health Organization's (WHO) seven key complementary indicators.¹ A gender lens was adopted across the research questions and sub-questions in order to compensate for the lack of male participation in complementary feeding as there is little to no information on the role men play in young children's feeding practices. The research questions were answered through primary qualitative research and focused on understanding CF practices at the community level, therefore aiming to learn from all major local-level key stakeholders including mothers, fathers, caregivers, service providers and community leaders.

3.1 Primary data collection tools

Primary data collection used qualitative research techniques including key informant interviews, focus group discussions, and in-depth interviews with parents, caregivers, service providers and community leaders at the local level. Field observations and informal conversations with community members were integral parts of the research process. The instruments through which primary data was collected and descriptions of their purpose are provided below.

Key Informant Interviews (KIIs): Key informants were people with in-depth knowledge and understanding of particular subjects. The purpose of the KIIs was to gather contextual information regarding common KAPs around complementary feeding, underlying reasons for these practices and the linkages of CF attitudes and practices with access to water and sanitation, food security and social protection.

KIIs were conducted at the community level, with community leaders and service providers mostly accessed by local people.

Key informants with different positions and perspectives brought their own sets of interpretive biases to the analysis, thus adding depth to the information. In this type of qualitative research – where there is no single absolute truth and where difference (rather than standardization), including outliers, is actively sought, trustworthiness in interpretation can nonetheless be strengthened by cross-checking or triangulating the views and analyses from different key informants, focus groups and in-depth interviews.

Focus group discussions (FGDs): FGDs were utilized as semi-structured tools moderated to provide sufficient detailed information from a range of contexts and backgrounds that allowed for comparisons across and between groups. The semi-structured nature of these discussions also meant that any significant topics that arose during fieldwork could be explored and analysed appropriately.

The objective of the FGDs was to gather data on mothers', fathers' and caregivers' perceptions. The participatory nature of these FGDs helped participants to discuss, analyse and present their views on issues related to CF practices.

¹ World Health Organization, 2010, Indicators for assessing infant and young child feeding practices part 3: country profiles. Available at: http://apps.who.int/iris/bitstream/handle/10665/44368/9789241599757_eng.pdf?sequence=1

Thus, participants in FGDs included mothers, fathers, caregivers, and service providers. In each administrative division, FGDs were conducted with different groups of people based on contextually-relevant factors. Groups were formed of 6–8 people with the same social characteristics or interests – i.e., homogeneity in terms of social characteristics – firstly, concerned with complementary feeding, and secondly by category e.g., mothers, caregivers, service providers etc. Further stratification was done for more focused and targeted information, as described further below. However, it was also important to maintain a degree of flexibility so that different contextual factors could be addressed.

In-depth interviews (IDIs): FGDs were complemented by individual interviews with selected mothers, fathers and caregivers in each community for in-depth information based on their personal knowledge, attitudes and practices. IDIs with male and female household members who were decision-makers regarding feeding practices explored perceptions and attitudes towards direct and underlying determinants of feeding practices, particularly related to complementary feeding, food availability and affordability, nutritional status and intra-household dynamics.

Interviews with mothers and caregivers included details of their current CF practices, and explored the reasons for and details of specific behaviours and attitudes. With fathers, the emphasis was on their knowledge of and attitudes towards child nutrition, and their role in the CF practices for children in the household. Male respondents were also probed for their perceptions on access, availability and affordability of good food items for young children. Mothers were considered the most important respondents in IDIs, considering their role and responsibility in CF practices for infants and young children; therefore, a larger number of mothers were interviewed compared to caregivers and fathers who were assumed to play a secondary role. The range of topics covered in the IDIs complemented and expanded on the topics covered in the FGDs and KIs.

Field observations: Field observations were a part of all field activities as a means to understand the research subjects' actual actions, reactions and practices in their own environment as well as in a controlled environment such as during research activities that enriched the study with contextual analysis. An observation checklist was prepared for researchers covering: living conditions (during home visits and in general); water sources and sanitation conditions (household and community); attitudes and reactions during questioning (responses on various thematic areas); confidence in their current practices and beliefs; and family dynamics, roles and responsibilities, preparation of food and feeding responsibility, quality, quantity and frequency, and cleanliness.

3.2 Respondent categories and sample size

One urban and one rural community was selected in each district through convenience sampling. For urban communities, mostly low-income localities were selected in the main urban centre of the respective district headquarter town, while rural communities were selected in consultation with key informants and were located at least 20–25 kilometres from urban areas in order to exhibit more rural characteristics.

For triangulation purposes and to ensure a more holistic understanding of CF practices and the influences on these practices, data was collected from four main categories of respondents who play a significant role in feeding practices for infant and young children (6–23 months). These were:

- **Mothers:** IDIs and FGDs were conducted with mothers according to the age of the baby and current breastfeeding practices in order to differentiate CF practices. Mothers were the primary

research respondents as it is assumed they are the gatekeepers of their children's food intake.

- **Fathers:** IDIs and FGDs were carried out with fathers of children aged 6–23 months. Fathers are assumed to be key players in determining the type of nutrition and diet provided to the family because they are predominantly the main providers for the household.
- **Caregivers:** Caregivers, especially in the traditional Pakistani family structure, play an important role in the upbringing of children including feeding behaviour. IDIs and FGDs were conducted with grandmothers and older female relatives who took care of a child or children aged 6–23 months.
- **Service providers:** The assumption was that healthcare providers are important in influencing parents and caregivers' CF practices and can provide an external view of the barriers and enablers that determine feeding practices for young children. IDIs and FGDs were organized to get both a holistic view as well as to elicit multiple perspectives.

In addition, **KIIs were conducted in each community with influential community members or opinion-makers** to obtain an overview of community socioeconomic characteristics, CF practices and local conditions including household characteristics that affect these behaviours. While key informants provided this overview, the four CF gatekeepers listed above gave in-depth information specific to their roles and responsibilities and, of course, their perspectives, about complementary feeding.

Within each district, KIIs were conducted with one female community leader with local knowledge in each locality (rural and urban) in addition to another with a service provider. This amounted to a total of three KIIs in each selected district with one district-level and two community-level KIIs.

Additionally, two FGDs were carried out with mothers in each of the rural and urban localities, amounting to four FGDs with mothers per district. One FGD with fathers and one FGD with caregivers was held, alternating between rural and urban localities. Two FGDs with service providers were also conducted in each district. Thus, a total of eight FGDs were carried out in each district: two district-level and six community-level FGDs.

Two IDIs were conducted with mothers in each locality (rural and urban) of each district, amounting to four IDIs with mothers per district. Furthermore, the mother's group was segmented such that two mothers selected within each district had a child aged 6–11 months and two had a child aged 12–23 months. Out of the total IDIs with mothers (144), 20 were with BISP beneficiary mothers. Additionally, one father and one caregiver IDI was conducted in each district, alternating between rural and urban localities. Thus, a total of six IDIs were conducted in each district, all at the community level.

The sample size and number of tools were not designed to be statistically representative and generalizable across populations but rather to be contextual and explore complex issues in depth.

Table 1: Data collection tools

	PROPOSED RESPONDENTS	NUMBER PER DISTRICT/DIVISION	EXPECTED TOTAL
Key Informant Interviews	Service providers	1	36
	Female community key informants	2	72
Focus Group Discussions	Mothers	4	144
	Fathers	1	36
	Caregivers	1	36
	Service providers	2	72
In-depth Interviews	Mothers	4	144
	Fathers	1	36
	Caregivers	1	36
Observation checklists	With every tool		612

3.3 Fieldwork districts

Fieldwork was conducted in all 36 administrative divisions of the country covering the four provinces of Punjab, Sindh, KP and Balochistan, three regional territories of GB, AJK and ICT, as well as FATA, now the tribal districts of KP. Within each division, the divisional headquarter district was selected and within it one rural and one urban community was selected. A list of divisions and divisional headquarter districts is provided in Annex 1.

3.4 Field team

Fieldwork was conducted by teams of experienced qualitative researchers with fluency in the respective regional languages. There were separate teams for each province/ region with the Punjab team also covering the three AJK divisions.

3.5 Data analysis

In the field, all activities were audio recorded after consent of the respondents and participants and supported by field notes. All audio recorded interviews were transcribed and translated into Urdu.

In the first stage of data analysis, data compilation and reduction was done manually using a analysis framework based on three broad independent variables. These variables were either utilized in sample and respondent segmentation or information on these was obtained during data collection. The variables were:

- Geographic (provincial, divisional, and rural/urban)
- Age of child (6–9 months and 10–23 months)
- Currently breastfed/ non-breastfed child

For further in-depth analysis and data triangulation, the first cut of analysis was then disaggregated according to key respondents and the three variables, followed by subsequent layers of analysis based on key themes and their relationship with other variables. Further analysis was carried out according to the following thematic areas:

- Breastfeeding practices;
- CF KAP, with a focus on:
 - Decision-makers and influencers;
 - Minimum meal frequency;
 - Minimum dietary diversity;
 - Minimum adequate diet.
- Barriers and enablers for complementary feeding.
- Linkages with WASH, social protection and food security as crosscutting themes.

3.6 Ensuring rigour

A major methodological challenge in qualitative-led research is the definition and achievement of rigour. Qualitative research is sometimes accused of being open to research bias or anecdotal impressions, impossible to reproduce, and difficult to generalize.² However, in this study methodological rigour is best served not through a statistically representative sample but rather through a “systematic and self-conscious research design, data collection, interpretation and communication” (ibid.: 110). This research was guided by a number of key considerations:

- A clear sampling strategy that explains the justification for our identification of key informants and individuals for our focus group discussions, highlighting any limitations;
- Well-developed research framework, underpinned by appropriate methods and tools including structured or semi-structured interview guidelines;
- Comprehensive and rigorous training of researchers over six days, covering infant and young child feeding, qualitative research methodologies and tools refresher session, research design and framework and methodology, participatory sessions on research tools, work plans and field strategies, piloting of the tools, transcriptions and frontline data analysis;
- Triangulation of findings against different sources, both qualitative and quantitative;
- Member check of findings by different researchers throughout the research process to recognise, reduce and/or acknowledge individual researcher bias through a reflexive process; and

² Mays, Nicholas & Catherine Pope. Qualitative Research: Rigour and qualitative research BMJ 1995; 311 :109. DOI: 10.1136/bmj.311.6997.109

- A comprehensive peer review process including reviewers during design, implementation, analysis and report production.

A detailed approach to the research was outlined in the inception report. Moreover, the research team had extensive experience of using qualitative research methods.

3.7 Research ethics

In addition to the ethical standards outlined below, the evaluation team adhered to UNICEF procedures on ethical standards in research, evaluation, data collection and analysis, particularly when engaging with children.³ Even though researchers did not directly engage with children in this formative research study, it was ensured that the team was mindful of appropriate research ethics standards.

The research team upheld two main tenets of research throughout the process:

- **Ensure informed consent from all respondents:** It is crucial in field research to ensure that all respondents are treated with care and sensitivity, ensuring that they understand the purpose of the study and can be assured of anonymity where appropriate. Respondents should be made aware that their engagement with researchers is entirely voluntary, and that they have a choice to refuse to agree to an interview, and/or to not respond to questions.
- **Ensure the sensitive treatment of vulnerable respondents, especially children:** Research involving children – whether directly included in the study or in the vicinity of the research site – should ensure the safety of child participants at all times, ensuring that appropriate and fully informed consent is given by the child and his/ her caregivers.

3.8 Strengths and limitations of the study

- This was the first ever country-wide qualitative study of CF practices for Pakistani children aged 6–23 months.
- The study identified the root causes of poor feeding practices among children 6–23 months.
- The study employed a range of qualitative methods to achieve a more nuanced understanding of the CF practices, including FGDs, KIs and IDIs with mothers, fathers and mothers-in-laws as well as healthcare providers and key community members.
- The study was conducted across all of Pakistan’s provinces and regions to identify variations in the root causes of sub-optimal CF practices.
- This study forms part of the broader National Complementary Feeding Assessment and will help to triangulate and synthesize the findings of other studies including the Cost of the Diet and Optifood analyses.
- An important limitation of this study is the potential for social desirability bias in the responses provided.
- Lack of representativeness is another possible limitation of this study.

³ Director, Division of Data, Research and Policy, 2015 ‘UNICEF procedure for ethical standards in research, evaluation, data collection and analysis’ Document Number: CF/PD/DRP/2015-001, Director, Division of Data, Research and Policy (DRP).

4 RESEARCH FINDINGS AND DISCUSSION

This section presents research findings from four provinces and the regional territories of Pakistan, covering 36 administrative divisions of the country. It was generally observed from the data that there were very slight variations between rural and urban localities which can be attributed to the fact that within the region, the majority of residents had similar socioeconomic characteristics regardless of locality.

Other variables that had been hypothesized as significant in influencing children's feeding practices were: the education of parents, household size, age of baby (6–11 months or 12–23 months), and current breastfeeding status of the child. The research findings reveal that none of these variables had any conclusive impact on parents' CF practices, with the exception of current breastfeeding status, which showed some effect on mothers' practices related to complementary feeding. With a few exceptions, influencers and sources of information for complementary feeding and children's nutrition demonstrated similar perceptions, behaviours and attitudes.

4.1 Socioeconomic characteristics

The study population in both urban and rural communities mostly belonged to low-income households, representing the greater proportion of the selected localities. The demographic characteristics of most mothers and fathers show that parents were in younger age groups with mothers aged 25–35 years and fathers aged 30–40 years. The majority of caregivers, who were either grandmothers or great-aunts, were aged 55–65 years. The average household size varied according to region, with the largest family sizes in KP and its tribal districts compared to other regions. However, in general, rural household sizes were slightly larger across all regions due to a higher frequency of joint family structures.

The education level amongst mothers was generally low but compared to Sindh, KP and its tribal districts, Balochistan, and GB, mothers in Punjab and AJK had a higher education status with a noticeable number having attended higher secondary school. Amongst fathers, literacy levels were generally higher than amongst mothers, again with higher levels in Punjab, AJK and GB.

The main sources of livelihood in rural localities were manual labour, farming and small businesses (village shops, vendors and maintenance shops, etc). Very few women in the target population were gainfully employed. Rural women who were employed were largely engaged in seasonal agricultural labour work, or were school teachers or health workers. In many areas, women were responsible for family agricultural work or tending livestock. In urban localities, men had more economic opportunities and the data reveal more variety in income sources. Again, manual labour was common, alongside small businesses like shops, vendors, hawkers. Additionally many were employed as drivers, or in the private sector as salesmen, support staff, clerical staff, etc. An alarmingly high rate of unemployment and lack of economic opportunities was found in most communities, regardless of region, especially amongst families dependent on daily wages. This was especially pronounced in Balochistan and the tribal districts of KP communities, where many men and women blamed economic hardship for their inability to provide adequate food for their families.

Female mobility was limited in many communities, both urban and rural. In a noticeable number of communities of Balochistan, KP, and its tribal districts, women had to observe a strict

code of conduct in terms of physical mobility and were dependent on male family members for access to health services and markets. In these communities, lack of mobility was also mentioned by women as a barrier to providing an adequate diet to their children.

Access to social services like health, education and markets was less of a problem in Punjab, AJK and Sindh compared to other regions. However, rural residents generally confronted greater barriers in reaching health facilities and markets compared to the urban population.

In urban localities, residents mostly lived in congested areas in small permanent houses with two to three rooms. Urban localities generally appeared unplanned, with poor roads and open drains. Garbage dumps were a common sight in many urban areas. Rural residents had more space but their housing structures were less permanent structures, with several families interviewed living in *katcha* houses constructed of adobe, unbaked brick, clay, tin or wood.

4.2 Gender roles and responsibilities at household level

Pakistan is in general a patriarchal society where male family members have the main decision-making powers and women's agency is limited to the domestic domain. Women have little control over cash and are mostly responsible for everyday household chores.

In all regions of the country, the roles of males and females were well-defined, with a clear demarcation of responsibilities within the household domain and outside it (see Table 2). While everyday household-related chores, like washing, cleaning, cooking and caring for the children and family, were women's responsibility, earning and providing for the family was mostly men's responsibility. Fathers or male family members were mostly responsible for managing education needs and health problems as well, because these involved going outside the house and public dealing, with the exception of a few instances where women looked after children's education needs or were independent enough to visit health facilities on their own. Again, there were no urban and rural differentials in such cases.

Women in our homes are uneducated and don't know how to communicate and interact with doctors or teachers in case of a problem. They (women) have problems traveling alone and it is also not considered socially appropriate for females to go outside on their own. That is why we try to manage all outside dealings unless there is an emergency, in which case relatives or neighbours provide support. – Fathers' FGD, Sahiwal (rural), Punjab

From conversations with parents, caregivers and key informants, it became clear that like all other physical and caring needs of young children, feeding was considered the main responsibility of the mother. The father's role was directed towards providing food items while cleaning, cooking, serving and feeding was either the mother's responsibility or, if she was unavailable, another female family member's responsibility. Only a few fathers participated in feeding the baby and that was only occasionally.

Joint family structures were quite common, therefore, other family members also contributed to household expenditures and to attending to children. This was more common in rural localities where more people continued to live with parents and siblings. Grandmothers, aunts and older siblings played an important role as caregivers who assisted the mother in attending to babies and young children by cleaning, bathing, changing clothes and feeding them. They also contributed to decision-making regarding young children's dietary needs and feeding practices and were perceived

as important stakeholders by mothers and fathers in the context of complementary feeding.

The **role of the father in just providing and purchasing food items** was further confirmed by the lack of information most male respondents had about their child's dietary practices including food diversity and frequency of meals.

Table 2: Community perceptions of gender roles and responsibilities

FATHERS' ROLES AND RESPONSIBILITIES	MOTHERS' ROLES AND RESPONSIBILITIES
<ul style="list-style-type: none"> • Earning a living and take responsibility for fulfilling the needs of the family. • Buying groceries and food rations. • Taking unwell family members or child to hospital or doctor's clinic. • Managing education needs of children. • Conducting maintenance and repairs around the house (primarily rural). 	<ul style="list-style-type: none"> • Taking responsibility for all domestic chores, including preparing food for the family, taking care of children, cleaning the house, etc. • Tending livestock and farm labour (primarily rural). • Attending to children's schooling and everyday education needs. • Collecting water and fuelwood. • Taking responsibility for maintenance of the house such as clay plastering (primarily rural). • Taking care of the husband and attending to sick household members and the elderly. • Looking after guests, serving them food and fulfilling other hospitality-related needs.

4.3 Breastfeeding and its relation to complementary feeding

Breastfeeding was universally accepted, practiced and promoted by the entire research population including parents, caregivers and service providers regardless of region or demographic and social characteristics. Respondents strongly believed in breastfeeding as essential for the baby starting from birth until at least two years of age; in many cases, religious reasons were cited.

Breastmilk makes a child strong and healthy and is also promoted by Islam which considers it as one of the foremost rights of a baby unless the mother has a medical condition and cannot feed her baby. – Mothers' FGD, Sukkur (rural), Sindh

However, initiation of breastfeeding within one hour of delivery was still lacking in most instances with several mothers feeding their babies after a gap of several hours or even a couple of days. Although there was growing awareness about the nutritive value of colostrum amongst a significant number of mothers and caregivers, still many considered it an unhealthy milk which had to be thrown away as it was harmful for the baby. The highest number of mothers who actually fed their babies colostrum

was in GB where there is a widely-held traditional belief that colostrum is good for a child's health. Pre-lacteal feeds were also uncommon in GB compared to other regions of the country. Similarly, mothers and caregivers had a fair idea about the concept of exclusive breastfeeding but this was not implemented in actual practice. Many caregivers considered the baby to be exclusively breastfed if he/she was given liquids that were not supplementary milk, considering liquids such as water and other non-milk supplements acceptable within the definition of exclusive breastfeeding. Thus, many infants who were considered exclusively breastfed were started off with pre-lacteal feeds like honey and rosewater during the first hours of birth, followed by other liquids like tea, water, and other liquids besides mother's milk during the first few months. In Sindh, KP and its tribal districts, it was a common practice for mothers and caregivers to give black or red tea without milk to babies from birth to the later stages as it was considered filling and a traditional cleanser:

I initiated breastfeeding two days after my baby was delivered because I did not have enough milk until then. During these two days, we fed the baby red tea and boiled water so she wouldn't stay hungry. – Mother's IDI, Khyber Agency (rural), KP tribal districts

Note from the field: Influencers on breastfeeding

Breastfeeding was not only endorsed as the correct way but was also traditionally passed on through generations as the right practice as well as widely promoted by healthcare providers as highly beneficial for the baby. Mothers, fathers and caregivers in all districts said that they were fully aware of the benefits of breastfeeding and were also advised by their elders about its benefits.

Mothers, mothers-in-law and service providers like LHWs, Lady Health Visitors, doctors and traditional birth attendants guided mothers about breastfeeding practices including initiation, technique and frequency.

In one case, a young mother from rural Kohat (KP) began breastfeeding her baby ten days after birth once she learnt the process from her mother. Another mother in urban Karachi (Sindh) reported that she initiated breastfeeding within one hour of her baby's birth on the instructions of the female doctor who also told her the benefits of early initiation.

The practice of satisfying a child's hunger with supplementary liquids continued beyond the first six months, delaying initiation of complementary feeding. Some mothers continued giving their child a liquid-based diet for more than six months, believing that liquids are enough for the child. A significant number of mothers in all regions mentioned keeping their child on liquids for at least eight months, influencing the age of initiation of complementary feeding.

Similarly, some mothers initiated complementary feeding before six months of age because they felt that the child remained hungry with only a liquid diet. Some introduced semi-solids when the child was only three or four months old. In several cases the mother was influenced by other female family members who encouraged her to start the baby on other food items prior to six months.

Along with breastmilk I gave my child green tea, diluted Cerelac and cow's milk as well. I did this so that my child's stomach remains full. If I didn't give him these things than he would become really weak and would be hungry all the time. – Mother's IDI, Loralai (urban), Balochistan

It is plausible that breastfeeding practices have considerable impact on young children's food diversity and frequency. Many mothers felt that breastfeeding was safe, convenient and free of cost. Therefore, mothers replaced food with breastmilk because it was less bothersome than preparing food and then feeding it to the baby. This also relates to the high frequency of breastfeeding reported by most mothers, who breastfed on demand resulting in less food intake by the baby.

Note from the field: Currently breastfeeding mothers

In Sindh, in the 48-hour dietary recall of the mothers, out of 15 currently breastfeeding mothers, 11 were breastfeeding their babies (8 months and above) 6–7 times a day or on demand. Some of the mothers conceded that frequent breastfeeding had an impact on the baby's appetite.

4.4 Initiation of solid and semi-solid foods

There was a wide range of beliefs regarding the appropriate age for initiation of complementary feeding. Most mothers across the regions were aware that complementary feeding should be initiated after the first six months; however, actual practice varied from the WHO-recommended timeline. Among interviewed mothers, the latest age for initiation of complementary feeding was one year and the earliest was 40 days, reported by mothers in Punjab and KP respectively. At these ages, the mothers said that they started feeding the children highly diluted soft foods. Similar views were expressed by fathers and caregivers who gave varying ages for initiation of complementary feeding, although by and large most said after six months.

Starting complementary feeding at 6–7 months is too late because the baby needs to build its appetite at an earlier age. – Caregiver's IDI, Dera Ghazi Khan (urban), Punjab

Various reasons were provided by mothers and caregivers for initiating complementary feeding early or late, some of which were related to caregiving practices including poor knowledge, and to lack of economic resources compelling the mother to continue breastfeeding or a liquid diet like tea or diluted milk (see Table 3).

Parents who can afford to buy formula milks, Cerelac and other canned baby foods start giving their babies semi-solid foods at around four months because they think it will help their baby's development and growth. – Private general physician's IDI, Nawabshah (urban), Sindh

Table 3: Triggers for early or late initiation of complementary feeding

EARLY INITIATION (BEFORE 6 MONTHS)	LATE INITIATION (AFTER 8 MONTHS)
<ul style="list-style-type: none"> • Supplementary foods like Cerelac and fresh diluted milk introduced because of insufficient breastmilk. • Cost-effective for parents to give semi-solid foods instead of expensive formula milk. • Lack of knowledge about appropriate age of baby for initiating complementary feeding; many mothers and caregivers believed it was four months. • Availability of many choices in the market tempt parents to introduce new and presumably beneficial foods for the baby. • Poor caring practices lead parents and caregivers to introduce semi-solids early, as a result of which the baby stays full and demands less attention. 	<ul style="list-style-type: none"> • Continued breastfeeding was perhaps amongst the most common reason for late initiation of semi-solid foods. • Lack of financial resources posed a barrier to providing an adequate diet. Mothers continued to breastfeed their children and introduced semi-solids when the baby could eat the same food as the rest of the family. • Lack of knowledge about the correct age for initiation of complementary food and its importance to the baby's growth. • Poor caring practices of parents and caregivers. Several mothers did not have time to properly feed the baby because they had other chores.

Certain semi-solid foods were given by all parents and caregivers regardless of geographical, socioeconomic or cultural differences, with a few specific preferences by particular cultures. **The most common foods mentioned by everyone included: Cerelac,⁴ kheer (rice pudding), custard, mashed banana, boiled eggs, porridge, rice, khichri (rice with lentils and sometimes meat), biscuits dipped in tea or milk, cake, vermicelli, roti (flatbread), and yogurt.⁵**

Some foods traditionally given to children in specific regions were:

- *Choori*: roti mashed with sugar in butter or ghee with sugar, in Punjab.
- *Nisasta*: wheat cooked in water or milk with sugar and a little ghee or butter, in liquid form, in KP and AJK.
- *Dakka*: mixture of butter, honey, cardamom, and mint, in Sindh.
- *Suji halwa*: semolina cooked in milk or water with sugar to form a liquid, in tribal districts of KP.
- *Dowdow*: flour and milk, in GB.
- *Shaffay*: semolina cooked in apricot oil, in GB.

First foods were those that were perceived to be nutritionally dense, easy to digest, and that keep the child satiated, healthy and strong. Monetary considerations were also important in deciding initial foods as these were often prepared separately from the rest of the family's meals.

⁴ Although Cerelac is the brand name of a fortified infant cereal available in Pakistan, it is widely used by respondents as a generic term for packaged infant cereals.

⁵ Locally used terms are explained in the Glossary.

The first food I gave my child was Cerelac, this was based on the recommendation of the doctor who told me that this would be good for the baby because it is soft, full of nutrition and easy to digest. The doctor told me to start feeding him at six months. – Mother's IDI, Rawalpindi (rural), Punjab

First foods were based on the family's financial situation. In most cases, babies were mostly given whatever was available in the house. Parents and caregivers said that first foods were usually prepared at home like *suji*, rice or *khichri*, eggs or Cerelac. Cerelac was mentioned by many as a desired first food because it had suitable consistency and fulfilled the nutritional needs of the baby, but many mothers could not afford to give it regularly or prepare it according to instructions due to its cost.

While separate foods were prepared in most homes, especially when complementary feeding was initiated early, as the baby was considered too young to digest regular food, but this separately prepared food was usually either Cerelac or other quickly prepared foods. In some cases if special food was prepared, it was stored and used for multiple meals. Baby food charts in mothers' IDIs for all regions reveal that separately prepared foods were repeated three or four times over two days.

The key decision-maker with regards to the initiation of complementary foods was usually the mother of the child. However, various household and community members influenced the decision. It was common to get recommendations from healthcare providers such as doctors or LHWs regarding the initiation of complementary feeding. Other family members, including the father, maternal and paternal aunts, and maternal and paternal grandmothers, influenced the decision of the first food that should be fed to a child. But in some regions especially Balochistan, tribal districts of KP, AJK and GB, the data reflect greater influence of mothers-in-law and other family women in decisions relating to complementary feeding, compared to Punjab and ICT where mothers displayed more autonomy.

Note from the field: Role of elders

In AJK, it was noted that while mothers-in-law advised mothers on what to feed the children, in case of disagreement, the mother-in-law's advice would be followed as she was the household elder. This sometimes presented a hindrance to complementary feeding especially when non-traditional items could not be introduced in a child's diet.

During the initial phase of complementary feeding, mothers reported that they fed their child twice or thrice each day. Often children were fed small amounts in each meal. Mothers were found to rely on non-verbal cues when deciding the quantity of food to feed the child. Mothers mentioned that they fed the child to the point that he/she start spitting out food, taking this as a sign that the child was satiated. Most mothers did not try to feed their child more food after it was rejected. The child's satiation was also judged by mood and level of activity after food. Most mothers knew their child's preferences and fed them foods they preferred to eat.

The data also show that in the majority of cases parents did not keep a separate household budget for children's food and managed with the rations and groceries bought for the entire family. Only in two in-depth interviews with fathers in Punjab and KP respectively, did respondents say that they kept aside money for children's food items.

All family members depend on the same groceries so whatever is given to the baby is also from the same ration as the rest of the family. In case of any extra expenditure, people mostly have to take loans because their income is so tight. – Mothers' FGD, Tharparkar (rural), Sindh

5 COMPLEMENTARY FEEDING PRACTICES

This section discusses the CF practices prevalent in all regions of the country using the three main CF indicators: minimum dietary diversity, minimum meal frequency and minimum acceptable diet.

It is essential to bear in mind that all data discussed here are based on attitudes, perceptions and practices of the target population and is not assessed on any quantifiable measurable variables or indicators. Whilst average outcomes and frequencies are presented for certain indicators, these are not statistically significant and are not a valid representation of average indicators for the provinces and regions. Instead, they are presented as an illustration of the trends found in this qualitative dataset.

5.1 Minimum dietary diversity

In all regions of the country, understanding of food diversity was misconstrued by most of the target populations. Rather than dietary diversity according to various food groups, mothers and caregivers perceived diversity more in terms of taste, that is sweet or salty foods, and repeatedly listed items in the same food groups in slightly different forms. Besides poor knowledge about dietary diversity, parents and caregivers were also constrained in providing a variety of foods to their children primarily because they could not afford to do so.

Most mothers did not plan meals for their children and fed them snacks like biscuits, pieces of roti or tea, in addition to the same food as the rest of the family, which usually consisted of roti and vegetable curries. Data further indicate that seasonal preferences were practiced in feeding babies. For example, only six mothers out of 28 interviewed in KP said that they remained consistent in food variety regardless of season. The remainder said that they avoided giving eggs, potatoes, peanuts and *yakhni* during summer as these were considered “warming” or *garam taseer*⁶ foods and believed to be difficult to digest in summers. They preferred giving “cooling” or *thandi taseer* foods like yogurt, lassi and *kheer* in summers as these had a cooling effect on digestion. Certain food items were not consumed due to local misconceptions about their effects. For instance a mother in GB said that lentils are bad for a child’s health, that rice is a “cooling” food that can cause pneumonia in the winter and that juices can make a child sick.

In winters, children should not be fed bananas, yogurt and rice as it is not good for their digestion.

– Mothers’ IDIs, Dera Ismail Khan (rural), Swat (rural), Mardan (rural), KP

Fish, yakhni, eggs and dalia are not good in summer as they cause heat in the intestines and digestive system. – Mothers’ IDIs, Mardan (urban), Peshawar (urban), Bannu (rural), KP

Meat and fruit rich in Vitamin A consumption was quite limited in babies’ diet due to high prices. Meat was consumed only occasionally, on special events or when BISP beneficiaries received their cash transfer. In the case of fruits and vegetables, priority was given to affordable and available items. Bananas and guavas were the fruits most commonly given to children because of their easy availability in most parts of the country during two or three seasons annually.

Mothers were aware that it was important to feed children different types of foods but did not consider diversity in terms of food groups. For example, a mother might think that she was feeding

⁶ Taseer means “effect”. In Ayurvedic medicine traditionally practiced in South Asia there is a concept similar to the Greek notion of humours, that some foods have a cooling taseer and others have a warming taseer on the human body.

diverse foods if she gave her child rice, roti and potatoes in a single day; however, all of these belong to one WHO food group, “grains, roots and tubers”.

She is not old enough to eat solid foods, so I give her semi-solid foods which satisfies her hunger and she digests it. Doctors also say these things are important and that we should switch foods, and not feed the same thing. – Mother’s IDI, Muzaffarabad (urban), AJK

The research reveals that on average, breastfed children were fed 2.7 different food groups nationally, compared to 3.5 food groups for non-breastfed children. The figure in both cases is lower than the recommended minimum of four out of seven food groups.⁷ Across all regions, dietary diversity was higher for non-breastfed children compared to breastfed children. This was often caregivers preferred to feed children milk when the child was not breastfed and this was calculated as an additional food group.

The most popular food group across the country was dairy, which was fed to children in 121 households, followed by grains, roots and tubers, consumed in 117 households over a two week period. The least consumed food group was vitamin A-rich fruits and vegetables, followed by nuts and legumes, with 40 and 45 households, respectively, consuming such items in a two-week period. There was moderate consumption of eggs (84 households), meat products (74 households) and fruits and vegetables (97 households).

Figure 1: Food groups in complementary feeding in sampled household over a two-week period (national)



The diversity of foods consumed also varied across regions and across households. The table below shows samples of the high-diversity and low-diversity meals given to children across Pakistan on a particular day. In low-diversity cases, many children were predominantly breastfed and were given relatively few food items, in some cases only milk from other sources. However, it should be noted that the proportion of households feeding high-diversity meals was low across Pakistan.

⁷ The seven foods groups defined by WHO are: grains, roots and tubers; legumes and nuts; dairy products (milk, yogurt, cheese); flesh foods (meat, fish, poultry and liver/organ meats); eggs; vitamin A rich fruits and vegetables; and other fruits and vegetables.

Table 4: Sample high- and low-diversity meal days

REGION	HIGH DIVERSITY	LOW DIVERSITY
AJK	Milk, roti, fried egg, bananas, apples, pomegranates, suji, kheer, chicken	Porridge, milk
Balochistan	Milk, meat, eggs, papar, roti, apple	Goat milk
GB	Cow milk, French fries, egg, mutton, biscuits	Cow milk
ICT	Cow milk, boiled eggs, carrots, rice, banana, chips, peanuts	Egg yolk
KP	Tea, paratha, eggs, roti, guavas, rice, potatoes, peanuts, gajar ka halwa	Goat milk
KP tribal districts	Paratha, eggs, oranges, rice, meat, walnuts, minced meat	Rice and Cerelac
Punjab	Cow milk, roti, vermicelli, bananas, chips, peanuts, eggs	Rusk
Sindh	Cerelac, egg yolk, potatoes, bananas, biscuits, meat	Roti

5.1.1 Grains, roots and tubers

Grains, roots and tubers emerged as the most frequently-consumed food groups across all regions (see Figure 2). The common foods in this category included roti, potatoes, rice and kheer while regionally popular foods included *choori*, *nashasta*, *sagu dana* and *khichri*. Local foods are described in the glossary.

Mothers gave various reasons for feeding their children grains, roots and tubers, including nutritive value, importance for growth and health, ease of digestion as well as aiding in transition to family food later on. The last reason was particularly popular in Punjab where most foods were fed with the mindset that it would make the transition to family food easier. In GB, availability emerged as an important criterion, with mothers saying that foods from this category were available all year round and therefore were convenient to feed. Some mothers also mentioned feeding roti because it killed hunger and filled a child's stomach.

Roti is important to feed in the morning and evening so that the child's stomach remains full.
 – Mother's IDI, Quetta (urban), Balochistan

Potatoes in various forms such as boiled, mashed or fried as chips, was popular foods across the country and mothers cited convenience, taste and nutrition. Many mothers, caregivers and LHVs particularly mentioned fried chips were fed to infants because they caused weight gain and were consequently seen by mothers as healthy.

I took out the potatoes from the curry and washed them in water, mashed them and gave to the baby. – Currently breastfeeding mother's IDI, Peshawar (rural), KP

Figure 2: Sampled households using grains, roots and tubers for complementary feeding in a two-week period



Note: Following merger with KP, FATA now comprises the tribal districts of KP.

5.1.2 Nuts and legumes

Nuts and legumes were among the least-consumed foods across all regions. The proportion of nuts consumed was higher in AJK, GB and Balochistan compared to other areas. Legume consumption was limited, although some households mentioned feeding children chickpeas and kidney beans. Regional variations in consumption also existed – in AJK almonds were more commonly fed whereas in Punjab peanut consumption was more common.

Most households where infants consumed nuts mentioned that it was given to children when other members of the household were eating it as well. Most however, refrained from giving nuts to children as they were hard and not easy to swallow or digest. Mothers also mentioned that nuts are intrinsically a “hot” food (*garam taseer*) and should not be given to children, especially in the summer.

She is young, so I give her milk-based foods and rice as it is soft. I do not give her nuts as she is young and cannot chew or digest them. – Mother's IDI, Poonch (rural), AJK

However, legume consumption was also low despite the soft texture. Other than its use in khichri, there was limited mention of legumes in children's diets. A possible explanation is that people are not familiar with the nutritional value and benefits of legumes.

Figure 3: Sampled households using legumes and nuts for complementary feeding in a two-week period



Note: Following merger with KP, FATA now comprises the tribal districts of KP.

As seen in Figure 3, consumption of nuts and legumes was higher in GB and ICT and much lower in tribal districts of KP, Sindh and Punjab. In AJK, KP and Balochistan there was nominal consumption of nuts and legumes by infants and children.

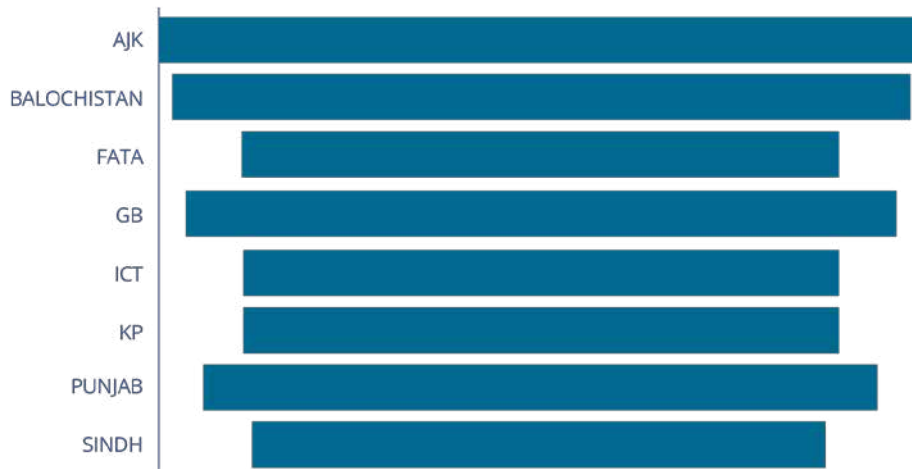
5.1.3 Dairy products

Consumption of dairy items, such as milk, yogurt, cheese and other associated products, was high across the country, especially in the form of milk. Almost all households fed their children some form of dairy product and those that did not had either not initiated complementary feeding or could not afford to feed their child milk due to financial constraints and instead gave alternatives like tea.

Mothers gave various reasons for feeding their children milk; however, all were aware of the importance of milk for infants. Reasons cited included the ability of milk to meet nutrition needs, improve growth, strengthen bones, promote good health and sharpen the mind. Consumption of dairy in the form of cheese was almost negligible and only a select number of households mentioned feeding it to infants. Yogurt proved to be more popular, especially in Punjab where it was fed to children in the form of *lassi*.

I fed her milk and rusk in the morning in addition to breastmilk. Then in the afternoon I gave her some kheer and cow milk, and breastmilk in between. As a snack I gave her biscuits and some milk tea. At dinner she had roti softened in milk. – Mother's IDI, Sahiwal (urban), Punjab

Figure 4: Sampled households using dairy products for complementary feeding in a two-week period



Note: Following merger with KP, FATA now comprises the tribal districts of KP.

Figure 4 shows the distribution of dairy consumption across all regions of Pakistan. It shows that whilst all households sampled in AJK gave children dairy products, and consumption of dairy was higher in Balochistan, GB and Punjab, it was a little lower, but still significant, in ICT, Sindh, KP and its tribal districts.

5.1.4 Meat products

This category comprises meat such as chicken, beef, lamb, mutton and organ food such as liver and gizzards. These are an important source of iron and protein among other nutrients. Consumption of meat products at the national level was limited, with variation between regions.

Meat consumption amongst infants and young children was highest in ICT followed by GB and KP tribal districts. AJK and KP had moderate consumption of meat products and consumption was lower in Punjab, Sindh and Balochistan (see Figure 5).

Figure 5: Sampled households using meat products for complementary feeding in a two-week period



Note: Following merger with KP, FATA now comprises the tribal districts of KP.

The most common meat fed was chicken and beef. Most infant consumption was based on taking pieces of meat from food cooked for the household. Over all minced meat was rarely fed by mothers, mostly because of financial constraints, and it was not a regularly cooked item in households. In some households that gave children meat products, liver was a popular choice, with mothers citing its soft texture and nutritional benefits.

Many mothers were aware of the importance of feeding meat products but mentioned they could not do so because of financial constraints. Others said the texture of meat products was difficult to take for their infants at such a young age. Reasons for feeding meat products cited by mothers included improved strength, better growth and protection from diseases.

Meat is a rarity at our house, we cook it after a full month sometimes. We can't afford to buy fruits either, even though all my children love eating them. – Mother's IDI, Bahawalpur (urban), Punjab

5.1.5 Eggs

Eggs are an important source of nutrition for children and considered a separate food group under WHO standards for complementary feeding. Mothers were generally aware of the nutritional benefits of eggs but some said they did not feed their children eggs as the child was too young, unable to chew or digest eggs. Some mothers and fathers said they could not afford to feed it to their children.

*Eggs are for Rs 15 here and we cannot afford to buy them. We can barely afford to buy the basics like flour, sugar and tea for the family. We also cannot afford fruits and vegetables.
– Father's IDI, Khuzdar (rural), Balochistan*

Some mothers and caregivers began by feeding the child only egg yolk and gradually increasing the amount to include the entire egg. Most mothers fed boiled eggs to their children and only a few gave half-boiled, fried or other forms of cooked eggs.

My baby has just turned six months. Only a week back I have started to give him a half-boiled egg which I give him twice a day. Gradually I will increase the amount when he is able to digest more. My mother-in-law advised me to give him an egg as a first food as it is nutritious and easy for the baby to digest if it is soft. It is also convenient for us because we have hens at home so eggs are available in the house all the time. Mother's IDI, Khyber Agency (urban), KP tribal districts

One of the most popular reasons given for feeding eggs across regions was perceived protection against the common cold and cough. Many mothers said they fed children eggs in winter for precisely this reason. Another common reason was that eggs are a complete meal and therefore essential for growing children. Other factors discussed by mothers included the importance of eggs for intelligence, growth and health.

Figure 6 shows the consumption of eggs across the different regions of Pakistan. It can be seen that consumption of eggs is high in AJK, ICT, KP and its tribal districts, and Punjab. In GB, the number of households that gave children eggs and those that did not was equal. In Sindh and Balochistan only very few households interviewed fed eggs to their children.

Figure 6: Sampled households using eggs for complementary feeding in a two-week period



Note: Following merger with KP, FATA now comprises the tribal districts of KP.

5.1.6 Vitamin A-rich fruits and vegetables

Vitamin A is an important element for an infant's nutrition; however, information about its nutritional value as well as its sources was limited across the board. None of the mothers interviewed in any of the regions across Pakistan focused on feeding children vitamin A-rich foods and even service providers and LHWs were unaware of the benefits and sources of vitamin A in fruits and vegetables.

I don't have information about vitamin A and which foods contain it. I do sometimes feed my child fruits and vegetables. Mother's IDI, Poonch (urban), AJK

Vitamin A-rich foods such as carrots, spinach, okra, melons and pumpkin were consumed in very limited quantities across Pakistan. They were mostly given to children on the account that they had been cooked at home and were given routinely. While a carrot dish (*gajar ka halwa*) was included

in high-diversity diets in KP (see Table 4), the number of households where children have access to such diets remains low. Greater awareness about vitamin A-rich foods is required across the country amongst mothers and caregivers as well as service providers and LHWs.

Figure 7: Sampled households using Vitamin-A rich fruits and vegetables for complementary feeding in a two-week period



Note: Following merger with KP, FATA now comprises the tribal districts of KP.

Consumption of vitamin A-rich fruits and vegetables was relatively high in GB (nine out of 12 households) and AJK (6 out of 12 households), followed by Balochistan (eight out of 24 households) and KP (seven out of 28 households). Punjab and Sindh saw the least consumption of this food group, and in ICT and tribal districts of KP no households reporting feeding their children such foods in the last two weeks.

5.1.7 Other fruits and vegetables

Fruits and vegetables were considered by mothers an important part of a child's diet, growth and nutrition, and were aware of the place of this food group in a balanced diet.

Consumption of fruits and vegetables was relatively high across all regions. In AJK 11 out of 12 households fed children fruits and vegetables, in Balochistan 15 out of 24 households, in tribal districts of KP one out of four households, in GB nine out of 12 households, and in ICT two out of four households fed infants food from this category. In KP, 21 out of 28 households fed infants fruits and vegetables, in Punjab 11 out of 25 households said the same whereas in Sindh 13 out of 24 households said they fed children fruits and vegetables in the last two weeks.

Common reasons for feeding fruits and vegetables included their importance for children's growth and health. Mothers said it was a good way to incorporate variety into a child's diet. Bananas and apples emerged as the most popular foods across regions. Bananas were particularly popular because of their soft texture, taste and ease of access. Apples were more popular in AJK and GB, possibly due to easier access in these areas.

Some mothers and fathers mentioned affordability when asked about the absence of fruits in a child's diet while others said fruits were too hard in texture and should not be fed to such young children. In GB, access to vegetables and fruits remained a concern and mothers mentioned feeding fruits and vegetables that were easily available.

We try to give our children fruits like bananas and apples especially during the season as they are easily available and affordable. But we can't buy them on a regular basis because we can't afford to. Besides, there are other children in the family who naturally also want to eat fruit so providing for everyone is beyond our economic means. – Mothers' FGD, Dera Ghazi Khan (rural), Punjab

Figure 8: Sampled households using other fruits and vegetables for complementary feeding in a two-week period



Note: Following merger with KP, FATA now comprises the tribal districts of KP.

5.1.8 Shelf foods

Shelf foods were also consumed frequently by children across regions. These included items such as biscuits, chips, papar, candies, chocolates and other packaged produce. There was no nutritive value associated with these foods; however, mothers claimed children liked eating shelf foods, relatives brought such foods for children, and other children in the household shared it with the infant when they were consuming it. The most commonly consumed shelf foods were *papar*, chips, biscuits and toffees.

My two year old just walks to the corner shop near our house and buys chips and sweets on his own. Then he doesn't eat his food properly because he has already consumed so many biscuits or chips etc. The shopkeeper knows us so he doesn't even ask him for money and just informs us later about the cost. – Currently breastfeeding mother's IDI, Mardan (rural), KP

In AJK, eight out of 12 households gave their children shelf foods in the past two weeks. In Balochistan 23 out of 24 households gave infants shelf foods, in tribal districts of KP three out of four households, in GB three out of 12 households, in ICT all four households, in KP 19 out of 28 households, in Punjab 30 out of 36 households and in Sindh 16 out of 24 households gave their children shelf foods in the past 14 days.

5.2 Minimum meal frequency

The average meal frequency⁸ estimates the number of meals given to a child in a day. In calculating meal frequency, children are divided into breastfed and non-breastfed categories and further demarcated into age groups. The indicator does not include breastmilk as a meal but includes milk alternatives in cases of non-breastfed children.

When deciding the frequency with which to feed the child, most mothers and caregivers decided on the basis of the child's demand while a few decided on the basis of the family's routine. Most mothers fed children when they demanded food by showing signs of hunger. Mothers who practiced demand-based feeding relied on cues like crying, trying to grab food or following the mother around and demanding food (either verbally or non-verbally).

However, it needs to be kept in mind that most children were fed more or less the same food as the rest of the family and therefore usually fed at the same time as the other family members, usually three times a day. According to mothers and caregivers, children usually ate what was given to them and in case they did not like specific foods, they were given milk or shelf food instead. These were also provided in case of hunger outside regular mealtimes.

Mothers were interviewed in detail on how frequently they fed their children over the previous two days and the answers were recorded in a detailed food chart. Since convenience sampling was undertaken for this study, the data presented are not representative of the population. At best, they can provide an understanding of how frequently infants consume meals in various regions of Pakistan.

To fulfil my children's nutritional needs, I bring them chocolates, biscuits and fruits as these make them strong. – Father's IDI, Faisalabad (rural), Punjab

Table 5: Average daily meal frequency over a two-day period

REGION	BREASTFED	NON-BREASTFED
Pakistan	3.7	4.1
AJK	3.4	5.5
Balochistan	3.25	3.1
FATA	3.9	3
GB	4	5.5
ICT	4	4.5
KP	4	4
Punjab	3.8	3.2
Sindh	3.4	n/a

On average, our sampled data show that breastfed infants under the age of 23 months had 3.7 meals a day whereas non-breastfed children had 4.1 meals. In most cases, the number of meals for non-breastfed children was higher than their breastfed counterparts. This could be because breastmilk is not included as a meal in calculating frequency, whereas any replacement meal is.

⁸ Proportion of breastfed and non-breastfed children aged 6–23 months who receive solid, semi-solid or soft foods.

Moreover, it was observed that mothers are more likely to feed children other foods if they are not breastfeeding, especially if a child is older, citing increased nutritional requirements and need for developing food tastes.

The greatest number of meals given to children in a day was seven in Mirpur (urban), AJK, and Islamabad (rural), ICT, both to non-breastfed children. The lowest number of meals was nil – this was the case for breastfed children across multiple regions, mostly around six months of age, who had not yet begun complementary feeding. In Sindh, it was not possible to collect data for children who were not breastfed due to widespread breastfeeding practices.

Decision-makers and influencers on complementary feeding

Across all regions of Pakistan, mothers were found to be the primary decision-maker regarding CF practices since they were also the primary caregivers.

After the mother, female elders – most often maternal and paternal grandmothers – were mentioned as either a decision-maker or key influencer regarding choice of complementary foods. When both the mother and grandmother was identified as decision-makers, feeding decisions such as choice of food items, frequency of feeding, time of meals, were often divided between the two. For instance, in some cases we found that the grandmother was responsible for deciding the food items a child would be fed, while the mother was responsible for decisions related to meal times and frequency, since the actual feeding process was led by the mother.

Fathers had a limited role in feeding practices and were mostly in charge of household monetary decisions. When fathers were involved they often made high-level decisions rather than getting involved in day-to-day activities as they are often away for work or did not know enough about complementary feeding. Since fathers were involved in the monetary decisions of the household, their decisions influence the child's complementary feeding choices as well.

5.3 Minimum acceptable diet

Parents and caregivers were quite aware of the importance of an adequate and balanced diet for young children and its importance in children's growth and health needs. Amongst the seven main food groups, most respondents and group participants mentioned at least five groups with the least frequently mentioned being legumes and nuts, and vitamin A-rich fruits and vegetables, aside from carrots.

There were some regional variations in context of importance attributed to a specific food types because of both availability and traditional practice. In GB, nuts and fruits were mentioned by more respondents because they are part of the local diet. Similarly, parents in rural communities more often mentioned fresh milk products like goat and cow milk, *kheer*, *dhoodh patti* and vermicelli compared to their urban counterparts.

While mothers were not aware of food groups, per se, and did not know about their specific nutritional contents, in most cases they were eager to feed their children various types of food items with the general reasoning that the child gets bored of one type of food, it helps develop their palate, keeps the child healthy, and provides the child the nutrition required to grow.

5.4 Barriers and enablers to complementary feeding

Lack of adequate information about CF practices was mentioned by some interviewed mothers as a minor hindrance to good practice. Lack of information amongst mothers was also mentioned by several fathers and service providers who felt that mothers generally did not have sufficient knowledge about CF practices and dietary needs of children according to their age.

Most of the service providers accessed by parents for child-related issues do not have the required knowledge themselves. Poor people mostly visit basic health units [primary care facilities] or private dispensers etc. and seldom consult a properly-qualified MBBS doctor. These service providers only give half-baked information which at times creates more problems.

– Service provider KII, Rawalpindi (urban), Punjab

However, **juxtaposed with this lack of knowledge or information amongst mothers was the finding that parents and caregivers had multiple sources of information: family elders, the media, healthcare providers, friends and neighbours.** However, in some regions like rural Balochistan, tribal districts of KP in general, and specific areas of Punjab (rural Lahore), and Sindh (Tharparkar), the majority of mothers' information sources were limited to intergenerational knowledge or other community women, which meant that misconceptions continued down generations. There were no significant rural and urban differentials found regarding sources of information on complementary feeding.

Notes from the field: Electronic media

In tribal districts of KP, most houses did not have electricity therefore did not have televisions and limited access to and use of mobile phones or other electronic devices. In a number of communities of Balochistan, women were not permitted to watch television because it was not considered appropriate for females to be exposed to the content shown on electronic media.

In communities where LHWs were present, several mothers, caregivers and fathers mentioned them as an effective source of information on managing children's health and nutrition issues. The data reveal that although LHWs, as frontline health workers, tried to use their existing knowledge to address child nutrition or provide advice on adequate diet for young children, they said they had received no formal training on nutrition or other issues related to child health. The only region indicating a low impact of LHWs was KP's tribal districts, where mothers and caregivers reported no support from LHWs except children's immunization follow-up services.

It is evident from this research that **lack of economic resources is the main barrier** to incorporating adequate food quantity (in terms of number of portions) and diversity in children's diets. We found that affordability issues significantly influenced dietary diversity as parents were feeding their children the limited range of foods that they could afford to buy. It was mentioned that milk, eggs, meat, fruits and vegetables were hard to afford, whereas grains, roots and tubers, and shelf foods, were comparatively affordable. For this reason parents relied on these foods as staple diets.

I really want to feed her eggs on a daily basis, she even likes eating them, but we can't afford to buy them regularly. Meat is also a rarity at our house; we cook it after a full month sometimes. We can't afford to buy fruit either, even though all my children love eating them... when I have money I try to feed my children good food, but I rarely have the money to do so. – Mother's IDI, Bahawalpur (urban), Punjab

Lack of money is the only barrier in providing my children adequate food. If we had the money we would easily be able to provide food for our children. In our area things are easily available in the market, and are not too expensive either, but we do not always have the money to buy them.

– Mother's IDI, Dera Ghazi Khan (rural), Punjab

Access to food was by and large a considerable barrier for most mothers in rural areas of Balochistan, KP and its tribal districts, and GB but was not a major problem in most communities of the remaining three regions (Punjab, Sindh, and ICT). Inaccessibility was further exacerbated by unaffordability (higher prices); both issues often went hand in hand. In remote locations of Balochistan, the community often had access to a single local shop which sold goods at higher than market prices. In GB, harsh weather conditions meant that people relied on stored and imported foods in the winter, which were expensive and often unaffordable. These issues of accessibility and affordability significantly impacted the amount and diversity of foods given to infants and young children.

Yes, I think we should feed our children lots of different types of food but in our community we don't even have access to clean water, let alone different types of food... we can't even find eggs, chicken or mutton in our community, and we don't have access to fruit in the summer.

– Mother's IDI, Sibi (rural), Balochistan

There were variations in women's mobility and ability to access food from the market. In some families women could walk to the market, whereas in others they were not allowed to leave the house unaccompanied. This meant that in some families, mothers could not access markets themselves to get the child food and relied solely on the father or other men of the household; however, in many areas this was only a minor barrier to complementary feeding and did not majorly disrupt caregiving practices. In other parts of the country, however, constraints on the mother's and caregiver's time and energy was a major barrier to feeding diverse foods to the child. Often mothers and caregivers could not give the time needed for preparing food and feeding the infant or young child due to multiple household responsibilities and, perhaps, low priority given to complementary feeding. Most mothers fed their child family foods from a young age, and there was a common practice of giving the child the food item to play with and eat themselves. It was noted that mothers were **usually aware of their child's preferences and preferred to feed them foods that they enjoyed eating, even when these foods were not nutritionally dense or diverse.** The probable reason for this is convenience and to ensure a smooth feeding session. Mothers and caregivers agreed that feeding a young baby or child required patience and time, about 15–30 minutes, which

many mothers did not have because of their domestic responsibilities like cleaning, washing, and cooking. In most parts of the country, respondents noted that they faced more barriers than enablers in providing appropriate complementary foods to their children, except in Punjab where in some cases prudent practices served as enablers to complementary feeding. For instance, one mother interviewed in Punjab mentioned that **developing monthly budgets enabled her to provide an adequate quantity and variety of foods for her family and children throughout the month, and to plan and prepare for issues in advance.** She had also developed prudent ways of reducing her expenditures to utilize the budget optimally.

I make a monthly budget and that makes it a bit easier to feed the family... but it becomes very difficult if the children demand certain foods, then I have to decide whether I can provide these to them or not.

– Mother's IDI, Faisalabad (urban), Punjab

By and large, however, parents did not plan their young children's dietary requirements or maintain a separate budget for this purpose. Again, the main reason given by respondents was that financial resources were insufficient to stick to specific meal plans for babies and young children.

We found that some parents were able to **cope with variations in cash flow by developing strong local networks**, which would allow them to, for example, borrow from a local shopkeeper when liquidity was low.

Table 6: Barriers and enablers to complementary feeding

BARRIERS	ENABLERS
<ul style="list-style-type: none"> • Economic limitations prevent parents from providing adequate diet to children. • Household responsibilities and other priorities prevent mothers from allocating the time needed to prepare food and feed young children. • Lack of information and sufficient knowledge of mothers and other caregivers about dietary needs/ complementary feeding. • Continuing breastfeeding practice. • Traditional knowledge sometimes based on misconceptions. • Access to markets. • Mothers' restricted mobility. • Availability and commercialization of shelf food and junk food. • Poor knowledge of healthcare providers about children's nutrition, particularly complementary feeding. • Young children are mostly fed on demand, with mothers relying on the baby's own food preferences. 	<ul style="list-style-type: none"> • Sound economic conditions. • Proper knowledge of mothers and caregivers on age-appropriate dietary needs of children (6–23 months). • Supportive husbands who help in providing information as well as obtaining adequate age-appropriate food items. • Conscientious caregiving practices, including preparation of separate meals, organized meal times, appropriate time spent on feeding by the mother. • Joint family system is a support for the mother including in improved feeding practices. • Social protection programmes like BISP contribute in improved household feeding practices including complementary feeding.

6 CROSS-CUTTING FACTORS: WASH, SOCIAL PROTECTION AND FOOD SECURITY

The linkage between WASH and complementary feeding was recognized by almost everyone.

Mothers, fathers and caregivers alike emphasized the importance of clean utensils, handwashing and clean drinking water. Practices for washing and preparing a young child's feeding utensils were similar to those followed for the rest of the household. Some mothers reported that they ensured cleanliness before preparing a child's food and maintained it while feeding the child. Most mothers were concerned with washing utensils after use. In Punjab most mothers mentioned using detergent for washing dishes.

I wash my and my daughter's hands before we start eating food. We also wash our hands after using the toilet. This is because germs are transmitted through hands and they can make us sick.

– Mother's IDI, Sargodha (rural), Punjab

However, the use of soap for handwashing was not specifically mentioned, indicating possible use of plain water for handwashing. Using soap is considered critical behaviour for a baby's wellbeing, especially considering that multiple family members including older siblings may care for babies and young children.

Children mostly drank the same water as the rest of the household. Water sources commonly included piped water, wells, streams, ponds and underground bores. Some mothers mentioned that they boiled or filtered water for the child, however, not all practiced ways of ensuring water cleanliness.

Only a small number of selected respondents in each region were BISP beneficiaries. However, all those who were agreed that the cash transfer programme was a support for them and helped them in buying food rations as well as some food items that they could not otherwise afford, such as fruits or meat products. Beneficiary households said that most of the time they kept BISP money to fulfil their children's educational needs and buy food items. One father whose wife was a BISP recipient said that the BISP amount was too small to have an impact on their children's nutritional needs.

Non-beneficiaries also by and large agreed that social protection programmes like BISP provided support for poor households, and beneficiaries certainly had an advantage compared to non-beneficiaries.

Nationally, food security only emerged as an issue in association with affordability. Parents were unable to feed their children diverse foods, especially meat products, fruits and vegetables, because of the high prices associated with such produce. In some cases, families with extreme financial constraints would feed their children a combination of tea, biscuits and *roti*, severely impacting the quality and quantity of food children were fed and their nutrition requirements.

The main difficulty is that we have to buy a lot of the food products from the market [i.e. not their own produce] and these things are quite expensive, so it becomes difficult to buy.

– Mother's IDI, Gilgit (rural), GB

In GB and some areas of AJK, food accessibility was an issue, especially in the winter when roads were blocked by snow and supplies could not reach rural locations and markets.

The majority of fathers and mothers across the country said that access to and availability of required food items was not a major challenge as most food items were available in nearby markets. However, access was an issue in some districts in Sindh and Balochistan, where parents and caregivers said that they had to limit their children's diet to whatever was available in their local shops. Across Pakistan, the most prominent problem was that of affordability. Fathers, mothers and caregivers alike in most divisions were generally of the opinion that compared to five years ago there were more food choices, however people lacked financial resources to buy foods like fruits, meats and packaged items (like Cerelac) that were considered more nutritious than conventional unpackaged groceries.



7 CONCLUSIONS AND RECOMMENDATIONS

It is evident from the findings of this research that CF practices are poor in all regions of Pakistan regardless of the rural/ urban divide or the socioeconomic and demographic characteristics of low-income population groups.

Data collected from parents, caregivers and service providers reveal a high level of awareness amongst parents about the importance of breastfeeding, including continued breastfeeding until two years of age. However, the practice of exclusive breastfeeding was based on misconceptions in most cases, and many mothers administered liquids other than breastmilk to infants during the first six months of life. Early initiation of breastfeeding also faced barriers, with many mothers administering pre-lacteal feeds to their newborns and many continued to perceive colostrum as harmful for the baby, thus delaying early initiation of breastmilk.

Initiation of complementary feeding varied, not by region but at an individual level. However, in several instances across all regions, continued breastfeeding played a key role in delaying initiation of complementary feeding, and affected the quality of food and frequency of meals.

Dietary diversity was found to be poor, with most children fed 2–4 of the seven recommended food groups primarily due to economic barriers but also due to poor caregiving practices, whereby parents and caregivers lack adequate information about the concept of dietary diversity. Female family elders, community women and healthcare service providers, whose own knowledge was sometimes based on misconceptions and disinformation, had the greatest influence on mothers' decisions on complementary feeding. It was noted that most parents and caregivers perceived more costly food items, especially packaged foods, to be more nutritious and supportive of the baby's growth and healthy development. Indeed, many of these items were promoted through electronic media, advertising and private low-cost healthcare providers.

Data from the tribal districts KP, where many households had recently returned following displacement to camps, showed that intensive social mobilization (as occurred in the concentrated camp environment) can lead to a high level of information, but need to be accompanied by measures to enable households to implement and sustain new practices, such as ensuring the availability and affordability of recommended foods.

Recommendations emerging from this research are as follows:

- Mothers need to be provided with adequate information on age-appropriate CF practices such as minimum meal frequency and minimum food diversity, including education on diversity specifically in terms of food groups.
- Caregivers are important actors in CF behaviour and practices and also need to be educated on complementary feeding practices.
- The participation of fathers needs to be enhanced in infant and young child feeding practices, considering their crucial role as the main providers for the family and for managing household groceries. Male family members should be provided more awareness about adequate and acceptable dietary requirements of young children so that they can access and allocate financial resources for such food items.
- Locally-available and affordable nutritious foods need to be introduced to local communities including ways of preparing these foods so as to preserve their nutritional value.

- Healthcare providers contribute to influencing parents and caregivers on CF practices, however, they lack sufficient knowledge or information. Trainings and support materials such as food charts and growth charts should be provided at both private and public sector health facilities to facilitate healthcare providers.
- Public campaigns should be promoted to discourage feeding shelf foods to young children, including making other cost-effective and healthier food options that are locally available.
- LHWs and community health workers are important sources of information for most mothers and caregivers; therefore, such community workers should be proactively engaged in promoting effective child nutrition and CF practices.
- Mothers and caregivers should be sensitized further to understand the crucial linkages between WASH and CF practices, especially handwashing with soap and clean drinking water.
- Social protection schemes like BISP can play an important role in improving the nutrition status of infants and young children as they provide much-needed support to poor families in buying adequate foods for children. Therefore, nutrition coupons or similar social protection programmes targeting the health and nutrition of infants and young children should be considered by both public and private sector organizations.

Region-specific recommendations are as following:

- Data indicate that in Balochistan, KP and its tribal districts, female mobility was restricted for cultural reasons and women were dependent on male family members for accessing markets and health facilities. In such communities, the focus should be on community-based services to facilitate women.
- Although, fathers had little involvement in CF practices across the country, this was especially prominent in Sindh and tribal districts of KP. In these regions, therefore, more emphasis is required on the involvement of fathers in CF practices and decision-making, through awareness sessions in roadside cafés, restaurants and other public spaces.
- In most Balochistan communities, mothers and caregivers said that their knowledge was largely based on information from other community women and community health workers. Keeping this in view, community-based interventions with community women, especially elder women, can help avoid misconceptions and disinformation and strengthen the knowledge base at the community level.
- In most districts of Punjab, research findings show that parents had access to health facilities and the awareness to consult healthcare providers. However, specialized child nutrition services were lacking in the public and private health facilities used by low-income households. There is a dire need to build capacity of healthcare providers.

8. Annexure

GILGIT-BALTISTAN	
Division	District
Gilgit	Gilgit
Baltistan	Skardu
Astore	Astore

KHYBER PAKHTUNKHWA	
Division	District
Hazara	Abbottabad
Malakand	Swat
Peshawar	Peshawar
Dera Ismail Khan	Dera Ismail Khan
Mardan	Mardan
Kohat	Kohat
Bannu	Bannu
KHYBER-TRIBAL DISTRICT OF KHYBER PAKHTUNKHWA	

SINDH	
Division	District
Karachi	Karachi
Hyderabad	Hyderabad
Sukkhur	Sukkhur
Larkana	Larkana
Nawabshah	Nawabshah
Mirpur Khas	Mirpur Khas

BALOCHISTAN	
Division	District
Quetta	Quetta
Zhob	Loralai
Sibi	Sibi
Nasirabad	Nasirabad
Kalat	Khuzdar
Mekran	Kech

PUNJAB	
Division	District
Bahawalpur	Bahawalpur
Dera Ghazi Khan	Dera Ghazi Khan
Faisalabad	Faisalabad
Gujranwala	Gujranwala
Lahore	Lahore
Sahiwal	Sahiwal
Multan	Multan
Rawalpindi	Rawalpindi
Sargodha	Sargodha

AZAD JAMMU AND KASHMIR	
Division	District
Muzaffarabad	Muzaffarabad
Rawalakot	Poonch
Mirpur	Mirpur





1 RESEARCH FINDINGS AND DISCUSSION

The data reveal only slight variations between rural and urban areas, possibly because of the similar socioeconomic characteristics of respondents. Similarly, while education levels of mothers and fathers were assumed to be a key determinant for assessing complementary feeding, they did not emerge as an important variable.

1.1 Socioeconomic characteristics

The demographic characteristics of urban and rural communities were similar. Household sizes were large, with an average of eight people; larger households were particularly common in rural areas. Education levels varied amongst mothers and caregivers, and it was more likely for older caregivers to be less educated or even illiterate. **Only a small proportion of mothers had not attended school while many had completed primary or secondary school; some were even educated at the tertiary level.** In most cases, fathers were more educated than mothers.

In both rural and urban settings, household income depended on manual labour, employment in government offices or owning small businesses. Some households in both rural and urban localities also relied on remittances.

1.2 Gender roles and responsibilities at household level

Complementary feeding emerged as the responsibility of the mother, with the father responsible for household finances and fulfilling the family's needs.

The decision about a child's food is made by the mother or the grandmother. Mothers make the best decisions as they are with the babies all day and we are at work outside.
– Fathers' FGD, Muzaffarabad (urban), AJK

Table 1: Community perceptions of gender roles and responsibilities

FATHERS' ROLES AND RESPONSIBILITIES	MOTHERS' ROLES AND RESPONSIBILITIES
<ul style="list-style-type: none"> • Acting as the main breadwinner. • Buying household groceries and food rations. • Taking care of the family. • Taking the child to the doctor. • Working in the fields and taking care of livestock. • Acting as household decision-maker. 	<ul style="list-style-type: none"> • Taking responsibility for all domestic chores, including preparing food for the family, taking care of children, cleaning the house. • Fetching water, wood etc.

While few women were formally employed in AJK, **many were part of the informal sector, providing tailoring services or offering tuitions from home.** There were similar levels of mobility for women across AJK – most were free to go to their relatives' homes, to the markets or into the city. Except for a couple of cases, severe restrictions on leaving the house were not observed.

In AJK, women's mobility was associated with buying clothing and homeware rather than getting groceries or food items for children, which remained the responsibility of the father (see Table 1).

From the FGDs and IDIs, it was concluded that fathers had a very small role in CF practices, which was limited to bringing the requisite foods home. They attributed this to being out of the house most of the time and not being there to make decisions. **Despite their absence from decision-making on feeding practices, fathers were generally aware of the kinds of foods children were eating.** Community key informants reaffirmed these views, stating that men and women had pre-defined roles and responsibilities towards children, as shown in Table 1.

1.3 Breastfeeding and its relation to complementary feeding

Summary findings

- Mothers seemed unclear on what exclusive breastfeeding means and often introduced liquids such as water earlier than recommended.
- Lack of information led mothers to introduce complementary feeding early.
- Mothers cited various reasons for not feeding children breastmilk including lack of or limited production of milk, being ill, and the child's unwillingness to drink breastmilk.
- Some mothers, who could not produce breastmilk had switched to feeding children formula milk on the doctor's advice.
- In some cases, packaged products, including formula milk, sent from abroad by family members also impacted breastfeeding and CF practices.

In AJK, irrespective of breastfeeding practices, nearly all household members were aware of the importance of breastfeeding. It was discovered that some mothers were unaware of the recommended timeframe while others were told by their elders that the time period was four months. Few mothers were aware that exclusive breastfeeding necessitated the exclusion of all liquids from the child's diet; consequently, even mothers who reported exclusively breastfeeding their children were actually not doing so. In most cases, even mothers who believed they were exclusively breastfeeding introduced other liquids before the age of six months.

Often mothers give children younger than six months water, as they believe a child is thirsty. They think water is essential and should be included in the diet. – KII, Mirpur (urban), AJK

Mothers had a lot more information and spent more time discussing breastfeeding compared to complementary feeding. When asked about breastfeeding mothers gave very detailed answers and were very specific about the duration and importance of breastfeeding. However, when similar questions were asked about complementary feeding, mothers and caregivers were not as certain about the information. This indicates that mothers do not fully comprehend the importance of complementary feeding and have limited information on the subject.

Mothers in AJK who were not feeding their children breastmilk gave different reasons. Some mentioned a lack of breastmilk, poor health of the mother, as well the child's refusal to drink breastmilk. However, all women understood the importance of breastfeeding and wanted to breastfeed their children.

My diet was good, and I drank a lot of water but for some reason I could not produce enough breastmilk. – Mother's IDI, Poonch (rural), AJK

According to LHWs interviewed in AJK, doctors often ask mothers to not feed their children cow or buffalo milk, leading them to switch to formula milk. While most LHWs also disseminated this advice to mothers, they were not aware of the reasoning behind it, except one who stated:

I have heard doctors say not to feed children cow milk or buffalo milk as it has a lot more protein than a child needs at this stage and it is not good for the child. –Service providers' FDG, Mirpur (rural), AJK

One of the key informants also spoke of how family members who work abroad would disrupt breastfeeding and CF practices for children in AJK.

There are families where husbands work abroad and send powdered milk and formula milk for their children back home. Many mothers start feeding children these foods and sometimes replace breastmilk with powdered milk as well. They think if the father is buying it and sending it then why not use it. – Key informant IDI, Poonch (urban), AJK

1.4 Initiation of solid and semi-solid foods

Summary findings

- Women in AJK understood the importance of introducing semi-solid foods at six months.
- Complementary feeding did not impact the continuation of breastfeeding.
- Elder female relatives, doctors and LHWs were important sources of information.
- Texture was an important factor in feeding a child certain types of food.
- Non-verbal cues were used to assess a child's hunger and preferences.
- The child's preferences dictated the feeding schedule and types of foods fed.
- Foods fed early in the introduction of complementary feeding belonged to the dairy, grain and egg-based food groups.

In AJK, many women were aware of giving semi-solid and solid foods to children at six months, while some initiated complementary feeding earlier. In practice, most mothers (10 of the 12 mothers interviewed in-depth) introduced complementary feeding at six months of age, while others introduced it at four months.

Introduction of complementary feeding did not affect continuation of breastfeeding. Women who breastfed their children continued to do so regularly and those who did not relied on other sources such as goat milk, cow milk and instant milk to meet the requirements. Mothers and caregivers also mentioned that complementary feeding enabled them to address nutritional deficiencies due to a lack of breastmilk production or consumption.

Sources of information regarding complementary feeding included female relatives, doctors and LHWs. Mothers relied on the information given by their mothers and mothers-in-law as they were older and had more experience. A few mothers mentioned being visited by LHWs who told them what foods should be given to children. Special attention was paid to recommendations made by the doctor when a child was sick.

Many mothers focused on the texture of foods when introducing a semi-solid diet; the nutritive value of foods came second. When asked why certain foods were fed, mothers, fathers, caregivers and even service providers focused more on whether the food was **soft, chewable, easy to swallow** than the nutrition it provided. This could indicate limited knowledge about the nutritive value of various foods. Several mothers mentioned that harder foods were difficult for small children to chew. Fathers, service providers and caregivers shared these concerns.

Cerelac was a popular introductory meal for children. Many mothers said they first fed their child Cerelac on the recommendation of their relatives and LHWs. Some mothers explained this was because Cerelac has a soft texture and is easy to swallow.

*At six months a child is not able to eat things or digest them, so I give soft foods like Cerelac.
– Mother's IDI, Muzaffarabad (urban), AJK*

While sources of information were numerous, women made the final decision about when and what a child should be fed. Fathers did not play a role as they were not home, and women were in charge of domestic matters. Mothers did say that patterns of consumption change when relatives were around, as they fed children different types of foods especially packaged products.

Mothers and caregivers relied on non-verbal cues to assess if a child was hungry or full while feeding. There were no set times for when a child was supposed to be fed and how frequently. Mothers noted that they knew it was time to feed their children when they would cry and stopped when they would not eat any more food or spit some food out.

When my daughter was four months old I started feeding her Cerelac and boiled egg, as she was growing up and crying a lot, and milk was not sufficient for her. – Mother's IDI, Poonch (rural), AJK

Mothers felt they gave their children a variety of foods and assessed the quantities to be fed in different ways. There was no typical meal, and as a child got older, he or she received a combination of what was available at home, cooked at home, and liked by the child. The quantity of food to be fed was assessed according to a child's needs and mothers relied on non-verbal cues such as crying and refusal to eat to ascertain whether the child was hungry or full. Some mothers started by feeding the child a few teaspoons of Cerelac or sagu daana, and then increased the quantities gradually as they saw fit.

Children's choice often determined what they would be fed. Many mothers, caregivers and fathers said they liked giving children the foods the latter preferred and did not base the decision on nutritive value.

My daughter does not like meat or eggs, so it becomes difficult to give these things. Now I make French toast so that she eats egg in some form. – Mother's IDI, Poonch (urban), AJK

My child does not like the taste of potatoes, so I don't feed it to her even though I fed it to my other children. – Mother's IDI, Mirpur (urban), AJK

Food groups commonly used for early complementary feeding included dairy, grain and egg-based foods. Eggs were a popular choice: half the mothers interviewed said it was one of the first few foods they introduced to their children. Variants of rice and dairy products were also prevalent. Among fruits, bananas were popular as they have a soft texture and are liked by children. Bananas are also relatively cheap and have no seeds, making them easy to prepare and consume.

Some popular early food choices made by parents and caregivers include *suji ka halwa*, *sagu dana*, *khichri*, *rice*, *roti*, banana and potatoes. Bread and *nashasta* were also mentioned by some interviewees.

1.5 Complementary feeding practices

Summary findings

- There was no typical meal for children in AJK.
- There was heavy reliance on dairy and grain-based foods for children.
- Shelf foods were fed by some mothers regularly.
- Mothers and caregivers had no information about vitamin A-rich foods.
- Commonly-fed fruits included apples and bananas.
- Some mothers fed children nuts and legumes, and meat products were also fed a couple of times a week.
- There were no issues of availability or accessibility, but some fathers cited concerns of affordability.
- Meal times depended on when a child was hungry.
- A sample high-diversity diet for a non-breastfed child aged eight months included milk, roti, fried egg, banana, apple, kheer, gourd (tinda) and chicken.
- A sample low-diversity meal for a non-breastfed child aged eight months included multiple feedings of milk and boiled egg.
- Household education did not make a difference to feeding practices.

Many mothers (eight of 12 mothers interviewed in-depth) in AJK fed their children shelf food, with no visible difference between urban and rural areas. Shelf foods included crisps, rusk, *nimko* and biscuits. Mothers said they fed such foods because children liked to eat them.

There was no differentiation based on gender in AJK. Almost all mothers said that girls and boys were fed equally as they had similar nutritional requirements. There was a divergence in only two instances – one mother mentioned girls should be breastfed longer whereas a service provider said the opposite. Overall, everyone agreed that there was no differentiation by gender.

We know that both girls and boys should be given the same foods, and there should be no difference. No one has told us this, we have always known it. – Mother's IDI, Muzaffarabad (urban), AJK

A wide variety of foods were available in the market. Service providers and key informants pointed out that many recommendations made by doctors and LHWs related to products that are easily available in the market. Traditional foods were fed to children because they were readily available in the region.

In terms of **accessibility**, all individuals interviewed stated that access to food was easy in both urban and rural areas, although service providers and fathers mentioned that prices were higher in rural areas. Mothers did not mention any particular difficulty with regards to accessing different kinds **of foods for their children**.

While interviewed mothers mentioned no concerns about **affordability**, the issue was raised multiple times by fathers, service providers and key informants. Service providers remarked that

one of the reasons why children did not get proper nutrition was because parents could not afford to buy appropriate foods such as meat, fruits and in some cases even milk.

Fathers also mentioned limits on what they could feed their children because of financial constraints.

Because of my situation I do not face financial difficulty, but there are factors that need to be considered. For example, buying diapers is a burden and sometimes it becomes an added expense.

– Father's IDI, Poonch (urban), AJK

The biggest barrier to proper nutrition is not having enough money. If we have money we can buy different kinds of foods, which is not possible in less income. If I had more money I could bring fresh foods for my child but as I don't, I have to give the child what is already bought.

– Father's IDI, Muzaffarabad (rural), AJK

1.5.1 Minimum dietary diversity

There was no noticeable difference in meal frequency or diversity by district, locality (urban/rural), parental education or employment status. This may be because most families had similar socioeconomic conditions. Interviews with service providers also noted that illiteracy is not a barrier, as many illiterate mothers are very well-informed.

There were some differences in dietary diversity and meal frequency between breastfed and non-breastfed children. This is understandable as consumption of breastmilk is significant, especially at a younger age. In non-breastfed children, breastmilk would have to be substituted by other food groups. For example, in comparing a breastfed and non-breastfed child aged eight months in urban Mirpur and Poonch respectively, it was seen that the non-breastfed child was fed six meals from five different food groups compared to three meals from three different food groups for the breastfed child.

Mothers paid attention to diversity in food items but not food groups. Thus, they seemed unaware of the recommended food groups and considered roti, rice, and potatoes to be diverse foods even though they fell within the same WHO food group. Similarly, breastfeeding mothers gave little regard to dairy products in their children's diet, presumably because they believe the requirement was met by breastmilk alone.

Nevertheless, women fed multiple food items to their children in AJK and there was some diversity in terms of food groups. From the sample of mothers selected for IDIs, five out of eight breastfed children met the minimum dietary diversity requirements, and two of the three non-breastfed children in the pool exhibited minimum dietary diversity. Amongst breastfed children, two of the six aged 6–11 months, and all three children aged 12–23 months, met minimum dietary diversity, with four to five different food groups consumed the previous day.

High diversity in food groups was seen in some sampled households. A sample high-diversity diet for a non-breastfed child aged eight months included milk, roti, fried egg, banana, apple, kheer, gourd and chicken. Conversely, a low-diversity meal for a breastfed child of the same age included multiple feedings of milk and a boiled egg. There was no pattern regarding when a child was fed, although most were fed frequently. Meal timings seemed largely dependent on when a child was hungry.

1.5.2 Minimum meal frequency

In AJK, the sample breastfeeding children consumed two or more meals. Similarly, the minimum meal frequency for breastfed children between 9–23 months is three meals, and all sampled children met this criterion. It is recommended that non-breastfed children aged 6–23 months should consume a minimum of four meals a day; most non-breastfed children in AJK met this criterion.

1.5.3 Minimum acceptable diet

In AJK there was heavy reliance on staples such as potatoes, roti, and milk, and few mothers fed their children other common food such as custard, vermicelli, porridge, and *khichri*. Some mothers fed children apples, bananas and pomegranate, while nuts, such as almonds, were also a popular choice. Mothers also fed their children potatoes, including chips, for strength.

She is not old enough to eat solid foods, so I give her semi-solid foods which fills her hunger and she digests it. Doctors also say these things are important and that we should switch foods, and not feed the same thing. – Mother's IDI, Muzaffarabad (urban), AJK

Analysing dietary habits over a 14-day period showed that dairy (especially milk), rice and eggs were common staples in infant diets. Some families also frequently fed children nuts and legumes, and others gave meat products a couple of times a week. Fruits and vegetables were fed to children at least once a week, and in some households every day.

In AJK, **dairy** proved to be the most popular food group. Mothers and caretakers seemed to be aware of the importance of this food group for children. Milk was used for feeding and as the base for many other foods. In IDI,s mothers claimed that they had fed their children dairy products every day or frequently over the past two weeks.

Grains, roots and tubers was the second most popular group with most mothers feeding it to their children frequently or every day. Most common foods included roti, rice, paratha, potatoes and porridge. Mothers fed these to the children as they were typically available at home and were cited as a path to the child eating proper food in the future.

Many mothers, fathers and caregivers were aware of the importance of **eggs** and fed them frequently to their children. Many mothers started by giving egg yolk and full eggs to their children. From interviews with service providers, this was found to be a recommended practice.

Egg yolk has more nutrition and so we ask mothers to feed that to their children. It is important to feed egg and as the child gets older, an entire egg can be given.

– Service providers' FGD, Mirpur (urban), AJK

It was more common for mothers and caregivers to feed children fruits than vegetables. **Respondents had limited information regarding vitamin A-rich fruits and vegetables and the importance of feeding these foods to children.** However, fruits such as banana and apple were regularly given. Half the mothers interviewed claimed to feed children fruit every day or “frequently”, whereas others said their children consumed it once or twice a week.

I don't have information about vitamin A and which foods contain it. I do sometimes feed my child fruits and vegetables. – Mother's IDI, Poonch (urban), AJK

Some mothers also intermittently fed certain foods with no nutritive value, such as tea and biscuits to their children. **Other shelf foods such as rusk, chocolates and biscuits were also eaten by children and were often bought by fathers, uncles or other relatives.** According to service providers, financial constraints were a determinant in this regard.

As milk is so expensive some people cannot give it to their children. They often replace milk with tea as it has sugar and fills the child's stomach. – Service providers' FGD, Poonch (rural), AJK

Another important indicator is the incorporation of **iron-rich foods**⁹ in a child's diet. In AJK, half of the sampled children were fed meat products the previous day; there was no mention of commercially prepared iron-fortified foods such as grains or cereals by any of the mothers. Moreover, women were not aware that meat products contained iron. However, one mother stated that meat was important for blood production.

Interviews with mothers show that while there was no traditional breakfast for children, most mothers fed milk-based foods such as porridge and custard alongside milk. Lunch again varied from milk to rice or roti in milk, or in some cases pulses or meat, along with some fruit. Dinner included meat, roti, fruits or vegetables and in some cases porridge.

Women had various reasons for making food choices: eggs were seen as important for strength, milk for nutrition, and fruits required for healthy growth. Potatoes were given because they were filling and did not require chewing. A few mothers mentioned they fed their children potato chips, since they liked them. Meat was less commonly given, possibly because of cost concerns and its tough texture compared to other foods. Some mothers fed pulses such as *maash* (white lentils) and chickpeas as well as nuts, including almonds and raisins. A few mothers also mentioned being cautious with their child's diet to avoid risk of diarrhoea.

She is young, so I give her milk-based foods and rice as it is soft. I do not give her carrots as she cannot chew them, but I do give her eggs and small pieces of meat when she asks for them. – Mother's IDI, Poonch (rural), AJK

He eats boiled egg and fried egg for strength, fruit and meat to meet his blood requirements, and I give him water with nimkol [oral rehydration salts] to prevent dehydration. –Mother's IDI, Mirpur (rural), AJK

No separate foods or food budgets were made for children in most cases. At most, packaged products such as formula milk and Cerelac, and in some cases eggs, were especially bought for the child.

There are no special budgets made for children. Everything is bought in routine, and there is no thought that now that we have a child we need to separate some money for him. – Fathers' FGD, Poonch (rural), AJK

All mothers recognized the importance of a healthy diet but were not implementing the knowledge. Issues of affordability and lack of acceptance by family elders around introducing non-traditional items to a child's staple diet can be traced as factors behind the poor implementation of a healthy diet. However, there was also a concern about convenience. Many caregivers mentioned that mothers are often busy with housework and do not have time to spend with their children.

⁹ Based on WHO guidelines, this includes meat products and commercial iron-fortified foods.

The child's preference was another hinderance to healthy eating. Many mothers, fathers and caregivers mentioned feeding and buying foods that they believe their child would enjoy, for example, chocolates or biscuits. Such practices are often in opposition to recommended CF practices, especially if they replace meals for children.

Table 2: Barriers and enablers of complementary feeding

BARRIERS	ENABLERS
<ul style="list-style-type: none"> • Financial constraints affected affordability. • Children's preferences restricted what parents fed them. • Traditional mindset hindered proper nutrition (existing but limited in AJK). • Children were not separately accommodated in food or finances. 	<ul style="list-style-type: none"> • Awareness had increased even in uneducated households. • Improved education had made people more receptive to information. • Trust in LHWs was well-established. • Food was widely accessible in most cases.

Increased awareness and accessibility to foods proved to be important enablers of complementary feeding in AJK. LHWs said awareness also increased trust in their work, as mothers were now willing to converse with them and invite them into their homes.

They used to think that we are here to prevent them from having children and they would not talk to us. But there is increased awareness now, and people know that we have a lot more information to give, so they are willing to talk to us. – Service providers' FGD, Poonch (rural), AJK

Climate and geography were barriers to complementary feeding in AJK, but their impact was limited. Some parents and caregivers claimed that climate affected a child's health by increasing chances of fever and cold and limited the amount of fresh produce available. While geography did not limit access to food, in rural areas it was mentioned that food was more expensive due to the transportation costs.

I thank God that I don't have any difficulty with anything, and I am able to provide different types of food to my child. – Mother's IDI, Muzaffarabad (urban), AJK

There is difficulty in the winter. It snows a lot in the mountains and it is difficult for us to get food at times. But our neighbours have cows and so we can get milk from them and feed it to our child. – Fathers' FGD, Muzaffarabad (urban), AJK

*Sometimes fruit becomes very expensive in winters and we cannot afford it
– Mothers' FGD, Poonch (urban), AJK*

1.6 Decision-makers

Summary findings

- Mothers and paternal grandmothers were key decision-makers.
- Few fathers made feeding decisions but most were in charge of finances.
- In case of disagreement between the mother and grandmother, the latter's advice was followed as the elder in the household.

While mothers were the main decision-makers about when to introduce complementary feeding, female elders and relatives emerged as key influencers in AJK. Among female elders, the maternal and paternal grandmothers of the child seemed to have the greatest influence. Mothers reported they followed these elders' advice because they were the best-informed and most experienced. Service providers such as LHWs and doctors were also identified as a source of information in some cases. Service providers seemed knowledgeable about recommended breastfeeding and complementary feeding practices.

Generally, mothers make the decisions as they are raising the child and better understand what the child needs. We go to work and come back in the evening, so we are not home and do not make such decisions. – Father's IDI, Mirpur (rural), AJK

Generally, I ask the doctor as every person has their own opinions. Doctors are educated, and they know what is right and wrong when it comes to children, so their advice is always correct. – Mother's IDI, Muzaffarabad (rural), AJK

Our children are educated, they know what children need to eat. They make the decision themselves. – Caregivers' FGD, Mirpur (rural), AJK

It was noted that while mothers-in-law (i.e. the child's paternal grandmother) advised mothers on what to feed the children, **in case of disagreement with the mother, the mother-in-law's advice would still be followed, as she was the elder in the household.** This sometimes presented a hindrance to complementary feeding especially when older women prevented non-traditional items from being introduced to the child's diet. **The father's role in complementary feeding rarely included making decisions on what the child should be fed.**

Of course, I make decisions on what my child should be fed. I do not make decisions for other children, but I have to make them for my child. – Father's IDI, Mirpur (urban), AJK

Fathers will generally make decisions about which foods to bring home. If a mother hears that certain food is good for the child but it is too expensive, then the father will not bring it. – Service providers' FGD, Poonch (rural), AJK

1.7 Influencers and information sources

Summary findings:

- Access to healthcare was not a major problem in urban areas.
- Most healthcare providers were well informed about complementary feeding, although there were some gaps in knowledge.
- Trust in and access to healthcare providers had improved in recent years.
- Some LHWs were unaware of rudimentary concepts such as meal frequency.

In AJK, interviews identified a variety of sources of information, from relatives and doctors to the media. There was no lack of resources in AJK as many individuals cited books, television, LHWs, doctors, relatives, aunts, grandmothers, friends, co-workers as well as neighbours. Women said they had easy access to doctors and medical staff in most cases, especially for minor illnesses or concerns.

We ask the doctor for advice as they know everything. They correctly tell us what things are beneficial for the child. We also get information from the television. – Mother's IDI, Muzaffarabad (urban), AJK

I learn from books and articles, ask colleagues and neighbours what they do. Elders in the family, such as my mother, were also helpful in providing information. – Father's IDI, Poonch (urban), AJK

LHWs mentioned that they had considerable access to people's homes and held fortnightly or monthly meetings with groups of mothers in rural areas to provide them information about children, health and nutrition. They cited increased awareness amongst people as the reason why they could visit homes; previously they had been considered "family planning personnel" and not taken seriously.

We are welcomed into most homes now; the situation has changed a lot from five or ten years ago. We are now asked to come and explain things to parents and grandparents in their homes.

– LHWs' FGD, Poonch (urban), AJK

There is greater awareness about the kind of work we do, and it has moved away from the label of family planning. Even male members are now willing to let us talk to their wives and explain various health concerns and make recommendations. – LHWs' FGD, Muzaffarabad (rural), AJK

While in most cases information about complementary feeding supplied was accurate, there were information gaps even amongst healthcare providers. When mothers, fathers and caregivers quoted advice from doctors they correctly identified the duration of breastfeeding, introduction of complementary foods and the need for diversity in said foods. However, detailed interviews with LHWs showed that they were unaware of some rudimentary concepts such as the number of times a child should be fed – responses ranged from every hour to once or twice a day and up to five times a day. This highlights the need for better training of LHWs.

Since sources of information varied, mothers and caregivers typically followed the most common or recommended practices. There was however one outlier in AJK. A mother in urban Mirpur relied on information from a storeowner for best practices regarding complementary feeding. Such advice is likely to lead to unfavourable recommendations and to prioritize packaged foods, however a conclusive result cannot be drawn from one case.

Everybody has such different ideas about what we should feed a child. I do not listen to them as it becomes very confusing. I do ask the store owner where I shop if there are any recommendations for children as he seems to know about it. – Mother's IDI, Mirpur (urban), AJK

No one in AJK mentioned a lack of information about complementary feeding and nutrition. However, from the responses it could be understood that **awareness about complementary feeding was still lacking and was not as widespread or detailed as information about breastfeeding**. People had a general sense of what it entails but there remained gaps in information that can be filled with targeted information campaigns.

1.8 Cross-cutting factors: WASH

In AJK, most mothers were aware of the basic principles of hygiene involved in caring for infants and said they washed their hands before preparing meal for their children. It was unclear from the interviews if the mothers were aware of the importance of using soap, except for a few cases where it was explicitly mentioned. Only a few women mentioned the need to boil water before giving it to the child. Fathers were better informed about such practices.

I make food for my child at home and I wash my hands with soap before I do so. I also clean the pan in which I cook and will also wash the dishes in which I feed him very well. – Mother's IDI, Poonch (rural), AJK

I wash my hands before lifting my child only when I have worked, and my hands are dirty. We clean our hands after using the washroom and this is why our child is not sick. – Fathers' FGD, Poonch (urban), AJK

Caregivers had similar information as mothers but were more explicit in stating that they used soap to wash dishes and boiled water before feeding children. They were aware that children are sensitive and vulnerable to illness and it is essential that hands be washed to prevent the transfer of germs.

I boil the water before I give it to my grandson. Other people don't do it, neither for themselves nor for their children. – Caregiver's IDI, Muzaffarabad (rural), AJK

Service providers reiterated the importance of feeding boiled water to children multiple times. They also highlighted the importance of washing hands after dealing with animals, amongst other things. According to service providers, waterborne diseases were very common in their areas, as mothers did not boil water before feeding it to children. One service provider hypothesized that this was associated with cost.

In Punjab, people boil water because it is cheap to do so. Here LPG [liquid petroleum gas] costs Rs 1,400–1,500 per cylinder making it very expensive for most households. – Service providers' FGD, Mirpur (rural), AJK

Mothers were aware of diarrhoea as a condition and often self-treated their children by giving them oral rehydration salts (ORS).

Sometimes my child gets diarrhoea and I give him ORS or nimkol. This is the practice is in our area and what I have been told to do. – Mothers' FGD, Mirpur (rural), AJK

In some cases, mothers mentioned limiting the amount of food and the types of food a child was eating during diarrhoea, citing a weakened system and inability to digest. This was done to let the

stomach “rest” and prevent symptoms from worsening, but is contrary to WHO advice. Mothers also mentioned avoiding fruits and vegetables, as well as spicy foods for children during this time.

According to LHWs, there had been a massive change in hygiene over the last five to ten years, and people were more aware of the need to wash hands before cooking and handling the child, and understood the need to boil water before consumption, especially for children.

Overall, AJK fared better in terms of CF practices than other regions in the country. Mothers and grandmothers emerged as the main decision-makers, with fathers playing a limited role. Confusion over the nature of exclusive breastfeeding and appropriate age for beginning complementary feeding resulted in some mothers initiating complementary feeding earlier or later than recommended. There was heavy reliance on grains and dairy, and some mothers fed local produce like almonds; knowledge about vitamin A-rich fruits and vegetables was limited. Mothers relied on other mothers, mothers-in-law, other female elders and LHWs for advice and information on complementary feeding practices.







BALUCHISTAN

FORMATIVE RESEARCH ON
COMPLEMENTARY FEEDING
PRACTICES



1 RESEARCH FINDINGS AND DISCUSSION

As at the national level, provincial data from Balochistan reveal only slight variations. This can be attributed to the fact that populations had similar socioeconomic characteristics. Differences by districts and localities are noted where observed.

1.1 Socioeconomic characteristics

Demographic characteristics were similar amongst both urban and rural communities. Education levels were very low amongst a majority of women, but slightly higher amongst men. In villages, most households were either dependent on daily labour or farming. The majority lived in small housing units with limited access to latrines.

1.2 Gender roles and responsibilities at household level

Across the board, respondents indicated that there were predefined male and female domains in the average Balochistan family (see Table 1).

Table 1: Community perceptions of gender roles and responsibilities

FATHERS' ROLES AND RESPONSIBILITIES	MOTHERS' ROLES AND RESPONSIBILITIES
<ul style="list-style-type: none"> • As the main breadwinner, earning a living and taking responsibility for fulfilling the needs and expenses of the family. • Buying household groceries and food ration. • Taking care of the family and taking family members to the hospital. • Acting as the household decision-maker. 	<ul style="list-style-type: none"> • Taking responsibility for all domestic chores, preparing food for the family, cleaning the house. • Taking care of and feeding children.

1.3 Breastfeeding and its relation to complementary feeding

Summary findings

- Conflicting opinions between mothers and grandmothers could be a hindrance to breastfeeding practices.
- Lack of awareness regarding exclusive breastfeeding led some mothers to initiate complementary feeding early.
- The belief that breastmilk and other milks can satiate a child led to delayed initiation of complementary feeding.
- Some mothers relied heavily on breastmilk even after six months of age because it was seen as a free resource.

Breastfeeding was found to be fairly common. **Nearly all household members in Balochistan believed in practicing breastfeeding due to its health benefits.** Respondents described the importance of breastfeeding in many ways; some of the most common beliefs were that it fulfils a child's nutritional needs, minimizes the risk of infection – which is noted to be a particular concern with other milks and liquids – strengthens a child's bones, helps a child grow quickly and ensures that a child does not become weak.

As with complementary feeding, we found evidence that the child's paternal grandmother was a decision-maker in breastfeeding. **Delays in initiation were caused when the child's mother and grandmother had conflicting views about colostrum feeding.**

We found pre-lacteal feeds before initiation of breastfeeding were common in Balochistan. The mother's opinion about the health benefits of colostrum closely determined the practice of initiation of breastfeeding. A majority of those who delayed initiation believed that colostrum was bad for the child because it was too thick, yellow, unclean, contained blood, or could not be swallowed by a child. Mothers who gave their child colostrum did so because they believed that it contained various

health benefits including that it was filled with nutrients, packed with energy, a natural vaccine, and minimized the child's chances of getting infections. One mother noted:

Colostrum is the yellow and thick milk that is initially produced, it is very beneficial for the child and it should always be fed. It strengthens the child's immunity and prevents diseases. It also gives the child a lot of energy and nutrition. – Mother's IDI, Quetta (rural), Balochistan

A majority of mothers in Balochistan were not aware of how to practice exclusive breastfeeding, which influenced initiation of complementary feeding. Mothers who exclusively breastfed were found to do so primarily because they believed that breastmilk was sufficient for the child in their early months.

For the first six months the mother's milk is enough for the child, he becomes full and I know this because the child becomes quiet and doesn't cry. – Mother's IDI, Khuzdar (urban), Balochistan

Most interviewed mothers in Balochistan believed that in addition to breastmilk, other types of milk and liquids were needed to satiate their child's hunger. A child's perceived hunger, despite breastfeeding, was a major barrier to exclusive breastfeeding.

Along with breastmilk I gave my child green tea, diluted Cerelac and cow's milk as well. I did this so that my child's stomach remains full. If I didn't give him these things then he would become really weak and would be hungry all the time. – Mother's IDI, Loralai (urban), Balochistan

*I give my child supplementary milk because my child cries when he only gets breastmilk and remains hungry, so I have to feed him other milks such as cow or goat milk.
– Mother's IDI, Turbat (rural), Balochistan*

The practice of satiating a child's hunger with supplementary liquids continued beyond the first six months, delaying initiation of complementary feeding.

Most mothers believed in continued breastfeeding, but there was little consensus on the number of years a child should be exclusively breastfed. The most commonly-held beliefs regarding duration of continued breastfeeding were two years for boys and two-and-a-half years for girls. Here some gender differences were observed. **People cited religious guidance as the main reason for all recommended durations of breastfeeding.** Some mothers said that religion guides them to breastfeed for two years, while others said that religion guides them to breastfeed for boys for two and girls for two-and-a-half years. Other reasons included that breastmilk would help to strengthen the bones, and that it should continue until teeth are fully developed.

Finally, one of the main reasons mothers preferred to breastfeed was because breastmilk was seen as a free resource that is readily available in the household at all income levels. **Women continued to focus on breastfeeding even after the initiation of complementary feeding because of this reason.**

1.4 Initiation of solid and semi-solid foods

Summary findings

- There were mixed views and practices with regards to initiation of complementary feeding by giving solid or semi-solid foods.
- Introduction of complementary foods did not significantly influence the continuation of breastfeeding.
- When deciding on the quantity of food in initial stages, mothers and caregivers used a child's health and an assessment of his or her hunger to make the decision.

In Balochistan, there were mixed views and practices with regards to initiation of complementary feeding through solid or semi-solid foods. Several well-known soft foods were preferred as the child's first semi-solid foods. These included **Cerelac (mentioned by multiple mothers), rusk or biscuit dipped in tea, rusk dipped in boiled water, boiled potatoes, mashed bananas, suji halwa, porridge and rice pudding.**

When the child turned six months old we started feeding her semi-solid food, until then we had only given her breastmilk. In the beginning we used to give her Cerelac and breastmilk in the morning, boiled potato in the afternoon and biscuit dipped in tea in the evening, followed by breastmilk at night.

Caregiver's IDI, Quetta (urban), Balochistan

The decision regarding the appropriate time to introduce solid and semi-solid foods and the choice of food was often made by the women of the household, particularly the mother and grandmother. In almost all cases the mother and paternal grandmother were cited as the key decision-makers. This is because these women were considered to be best-informed about a child's readiness to consume solid and semi-solid foods based on their experience. In one case a father was cited as the decision-maker, the respondent qualified this saying that other female elders were not available to inform the decision, which is why the father took on the role of decision-maker. Thus, it was unusual for fathers to decide on matters regarding CF practices.

The decision to start complementary feeding was also influenced by various members of the household and wider community. When not acting as decision-makers, the maternal and paternal grandmothers were key influencers on when to introduce semi-solid foods. In this way, information regarding initiation of complementary feeding was believed to transfer across generations. When accessible, doctors were consulted and were found to endorse and prescribe Cerelac as first foods that are high in nutritional value.

We get our information about a child's balanced diet from our female elders. My mother told us that a child should be fed semi-solid foods at six months of age, so we did as she said as she is the most well-informed. – Father's IDI, Loralai (rural), Balochistan

During the initiation phase of complementary feeding, mothers most frequently reported feeding their child a variety of solid and semi-solid foods one to three times a day, usually along with breastmilk. **When deciding on the quantity of food at this initial stage, mothers and caregivers**

used the child's health and an assessment of their hunger to make the decision. Some mothers mentioned that they were not able to provide their child a variety of foods and fed them infrequently during this initial phase because they could not afford it and were often busy working in the fields.

1.5 Complementary feeding practices

Summary findings

- Typically breakfast for a young child in Balochistan was milk or tea served alone or with a rusk or biscuit to dip in it, along with breastmilk.
- Most children in the sample had low diversity in their diets. This usually meant that their diet primarily comprised one or both of the following food groups: dairy products and roots, tubers and grains, with the occasional addition of bananas or eggs.
- A typical meal included some form of grains, roots and tubers such as rice, potatoes or roti because these are considered to be staple foods.
- Shelf foods were very common in Balochistan, and were fed to children on a daily basis.
- Lack of financial resources was a major barrier to dietary diversity in Balochistan and mothers chose to feed children filling foods like grains, roots and tubers.
- People lacked access to a variety of foods in their local markets, which prevented them from providing a variety of foods to their children.
- Women's lack of mobility restricted them from accessing services and information.

In our sample of interviewed mothers, most **continued breastfeeding** at a high frequency while providing complementary foods. As noted above, breastmilk was considered to be a readily available resource, and when sufficient complementary food was not available mothers relied on breastfeeding.

I know that my child is older now and breastmilk alone will not fulfil his nutritional needs, but what can I do? – Mother's IDI, Sibi (rural), Balochistan

We found that a **typical breakfast** for a young child in Balochistan would be either milk by itself, or rusk or biscuit dipped in milk or tea, along with breastmilk if the mother was still breastfeeding. A few mothers also fed their children eggs or rice, but this was an occasional treat. It is interesting to note that it was fairly common to give a child tea along with the rest of the household. The most common form of tea mentioned in Balochistan was black tea, served without milk. Parents and caregivers felt that children enjoyed drinking tea with them.

We love drinking tea, and this is why our children enjoy drinking it too.
– Mother's IDI, Kech (urban), Balochistan

The food's nutritional value was not found to be a strong factor in food choice. Instead, there was greater emphasis on feeding foods that would fill a child's stomach.

We know a balanced diet is important for our kids, but we don't have the resources for that, so we give younger children chai and roti, and older children rice, potatoes and biscuits.

– Mothers' FGD, Sibi (rural), Balochistan

Thus, even though parents and caregivers wanted to provide an array of nutritious foods, lack of resources meant that this could not be a primary consideration. Therefore, **lack of economic resources, and affordability, emerged as the main barriers** to incorporating adequate quantity and diversity in children's diets.

We cannot buy different types of food because we are a poor household. We barely get to eat two times a day. We're lucky when we can eat something like daal once a day.

– Father's IDI, Khuzdar (rural), Balochistan

We belong to a poor household, we would love to give our children lots of different types of food, but our economic condition doesn't allow it. – Mother's IDI, Quetta (rural), Balochistan

I don't do anything to ensure that my child has eaten a sufficient amount of food. If we have food in the house, that's great! If not, then I just give them tea and roti to fill their tummies at night and put them to bed. How can I ensure they get sufficient amounts of food when we do not have food available in the house? When we have food then I feed him to his fill, when we do not have food then I dip biscuit in water and give it to him to fill the tummy. – Mother's IDI, Quetta (rural), Balochistan

Household and family size influenced a parent's ability to provide an adequate number of meals and variety of food groups. The number of children a woman had influenced the diversity of food groups. This was mostly because, with more children, the family did not have enough resources to adequately feed all its members.

If we find affordable and accessible food then why wouldn't we feed it to the child? When you have seven or eight people to feed in one house then how can you provide for everyone? Our children are growing up hungry. – Mother's IDI, Nasirabad (urban), Balochistan

Thus, **accessibility of food also prevented parents from feeding their children an adequately diverse diet.** This was primarily a concern in rural areas but was even found in a few urban communities in remote districts. Moreover, when a single local shop operated in a remote area, it often sold food items at higher prices, which added to the problem.

Yes, I think we should feed our children lots of different types of food but in our community we don't even have access to clean water, let alone different types of food ...we can't even find eggs, chicken or mutton in our community, and we don't have access to fruit in the summer.

– Mother's IDI, Sibi (rural), Balochistan

As with other parts of the country, **lack of mobility hindered women's ability to access markets and bring foods according to their own preferences.** Service providers also expressed concern regarding women's lack of mobility, as they could not access healthcare providers and information about complementary feeding.

In our community women are not allowed to go to the market on their own, sometimes I want to bring something for my child to feed him but I can't go to the market. – Mother's IDI, Kech (urban), Balochistan

Respondents noted that they faced several barriers in providing appropriate complementary foods to their children. No specific enablers were noted by any respondent. Instead, most stated that the absence of each barrier would be an enabler in itself.

1.5.1 Minimum dietary diversity

Overall, most children in our sample had **low diversity in their diets**. This usually meant that their diet comprised primarily of one or both of the following two food groups: **dairy products and roots, tubers and grains, with the occasional addition of bananas or eggs**. In such diets, provision of solid and semi-solid foods normally peaked during one particular time of the day, with milk being fed over the rest of the day. An example of a day's diet with a single food group is of a male child aged 23 months in Khuzdar whose mother fed him roti in the afternoon, biscuits in the evening and rice at night with breastmilk fed intermittently throughout the day.

Only a few children in our sample were fed meals with adequate dietary diversity. Their diets included solid and semi-solid foods spread across the day. An example of a day's diet that meets the minimum dietary diversity would be of a male child aged 13 months in Sibi, whose mother fed him rusk dipped in tea in the morning, rice and eggs in the afternoon, mashed banana in the evening and chicken with roti at night. It was interesting to note that **mother's education was a significant factor here, but only when the mother had at least graduated from college** – the sample only had two mothers who were college graduates, and both fed their children five food groups in a day.

1.5.2 Minimum meal frequency

Meal frequency typically ranged between two and four meals a day with an additional snack, and meal diversity ranged from one to five food groups a day. Eighteen of the interviewed mothers were feeding their children one or two food groups a day.

There was **no notable variance** in meal frequency or diversity by breastfeeding status and, by and large, district, locality (rural, urban) or parents' employment status. This may be because most families interviewed had very similar socioeconomic conditions.

1.5.3 Minimum acceptable diet

A typical meal included rice, potatoes, or roti, with gravy and the occasional banana, eggs, or meat. It was **common practice to feed a child grains, roots and tubers**, because this was considered a staple food in the household. Out of the interviewed mothers, nine fed their child grains, roots and tubers on a daily basis, five fed them a few times a week and the remaining fed them occasionally. Interestingly, we found that younger children were not fed this food group; this might be because mothers were still feeding these children a diet that was primarily liquid-based.

Some mothers mentioned that they fed their children rice, potatoes and roti because their child preferred these foods; they were easy to digest, contained energy and were available all year round. Some mothers said they only did it to fill the child's stomach.

Roti is important to feed in the morning and evening so that the child's stomach remains full.

- Mother's IDI, Quetta (urban), Balochistan

Dietary patterns also showed that mothers and caregivers were making decisions regarding complementary feeding on the basis of the child's age, with grains, roots and tubers introduced at a slightly older age.

Additionally, we found that children had a **high intake of dairy products**. Sixteen of the interviewed mothers gave their children dairy products on a daily basis. This was irrespective of the child's breastfeeding status and indicated, as suggested earlier, that parents believed that milk would satiate their child. Service providers reported that most mothers fed their children other dairy products through bottles. They suggested that the bottles used were usually unclean and caused the child to get sick.

Meat products were fed to children in very few households, and even there they were not available frequently. In the two days preceding the interview, one mother served her child fish for dinner, four mothers gave their children meat and two mothers served chicken. In households where meat was consumed, one mother mentioned having it daily and four mentioned having it once or twice a week. Meat was found to be very expensive for most interviewed individuals and, therefore, was not consumed on a regular basis. As with grains, roots and tubers, we found that meat products were typically given to children at least 11 months or older as mothers believe that younger children could not digest meat.

Eggs were consumed in very few households. Only nine of the interviewed mothers had fed their child eggs in the past two days. This could be because eggs are expensive in Balochistan.

Eggs are for 15 rupees here and we cannot afford to buy them. We can barely afford to buy the basics like flour, sugar and tea for the family. We also cannot afford fruits and vegetables.

- Father's IDI, Khuzdar (rural), Balochistan

Another reason for the infrequent consumption of eggs was the widespread belief that eggs have a *garam taseer* (hot effect) and so should not be consumed by children, particularly in the summer. This was mentioned by almost every interviewed mother and was believed across the province.

Parents were aware that **fruits and vegetables** are good for the child's health, but as the quote from the mother in rural Khuzdar suggests, these were **rarely consumed due to issues of affordability**. The only fruit or vegetable explicitly mentioned by interviewed mothers and fathers were bananas. Only two mothers said that they fed their child a banana every day, while nine said they did so occasionally. Family members were not aware of vitamin A-rich fruits and vegetables.

There was very little mention of legumes and nuts in children's diets. Only one mother interviewed had fed her child lentils in the two days prior to being interviewed and only two mentioned that they gave their children legumes and nuts a few times a week. The remainder were not feeding children these food items at all. Most interviewed mothers actively avoided giving nuts to their child because they considered them too hard and difficult for their child to chew. Parents also admitted that they were expensive and were rarely bought for the household.

In Balochistan, a surprisingly large number of children consumed **processed foods**. This was by far the most common food item fed to young children. Out of the 24 mothers interviewed in Balochistan, 23 fed their child some form of shelf food in the preceding two days. Only one mother had not fed her child any shelf food, but she had not initiated complementary feeding at the time of the interview. Most mothers fed children shelf foods on a daily basis.

Shelf foods such as biscuits, rusk and cake were fed as a snack or meal on their own, or softened by being dipped in milk or tea. Both practices were common across Balochistan. Some parents liked to serve because their children enjoyed having shelf foods. Others said that it was convenient and a means to an end.

*At night if nothing is available then I just give them tea and roti to fill their tummy so that they can sleep.
– Mother's IDI, Quetta (rural), Balochistan*

Here most mothers feed their children rusk and tea because most people are poor and that is what they can afford. – Mothers' FGD, Loralai (rural), Balochistan

Other shelf foods like Cerelac and packaged milk were less commonly used and only fed by two mothers in the past two days. Most parents and caregivers preferred to feed their children shelf foods like Cerelac as a result of advertisements they had seen on television. It was believed to be good for a child's health and was easy to prepare. Some children were given Cerelac, however, mothers and fathers mentioned that this took a heavy toll on the household budget.

Certain patterns emerged on children's diet during interviews. We observed that some children had a **primarily dairy-based diet**. This diet had uniform provision of milk (boxed, cow or goat) throughout the day, often along with breastmilk. Occasionally these children were fed one additional food item in a day, which was either a biscuit or rusk dipped in milk or a grain (rice, roti or khichri). Children with such dietary patterns were typically aged 6–10 months. We found that this was because parents thought their children were too young to start eating semi-solid foods more frequently during the day. As observed in Dera Murad Jamal, Nasirabad district, a child aged eight months who was no longer breastfed primarily consumed packaged milk throughout the day, and biscuits in the evening.

Most mothers, fathers and caregivers said that they did not differentiate in CF practices based on gender. Only a few parents mentioned that they fed boys and girls differently. **Some believed that boys have more difficulty digesting than girls, so they avoided giving boys foods that were seen as difficult to digest.** But the main reason for differentiating diets based on gender was due to the expected gender roles each would play when they grow up. **Some parents paid more attention to what they were feeding their daughters because they would grow up to bear children and needed the nutrition. Others said they paid more attention to what they were feeding their sons because they would grow up to support the family.**

We give both boys and girls the same type of food and do not distinguish between them they are both our blood. I know that some people in our community give boys more food, but we do not distinguish between them. – Caregiver's IDI, Loralai (rural), Balochistan

When deciding on the quantity of food to give a child, a mother normally decided based on her own thinking and experience. Moreover, most mothers stopped feeding when a child either stopped eating himself or resisted the food.

My child's level of hunger becomes very clear when I am feeding him, when he is hungry he will eat more, otherwise he will eat less himself. I estimate this from my own thinking and experience. I am his mother, I know at least how much the child is demanding. – Mother's IDI, Sibi (urban), Balochistan

Mothers normally waited for non-verbal cues of hunger before feeding their child. Non-verbal cues identified by mothers included crying, child circling around the mother, child drawn towards family foods and trying to pick food up. Most mothers relied on crying as the most common non-verbal cue signifying hunger. Often, when the child stopped crying, mothers took this to indicate that the child was full.

When asked about a balanced diet, most mothers showed awareness that a balanced diet would be diverse and contain several different types of food; fathers were less aware of a balanced diet. **The foods most mentioned by mothers as part of a balanced diet were eggs, different forms of meat, fruits, vegetables, and grains.** While mothers were not as aware of food groups and their nutritional content, per se, they exhibited sound knowledge of a healthy diet in most cases. A balanced diet was believed to be beneficial for the child because it fulfilled their nutritional needs, kept them healthy, minimized the risk of illness, promoted growth and strengthened bones.

Overall, we found that mothers and caregivers chose specific food items based on their perceived ease of digestion, ease of preparation, depending upon a child's preference and most importantly the item's ability to fill a child's stomach with few resources. Several mothers and caregivers mentioned that they selected foods that would not upset their child's stomach, or cause vomiting or diarrhoea. Moreover, there was a lot of reliance on foods that were easy to prepare. In most cases, separate food was not prepared for children and they were fed family foods. Moreover, mothers and caregivers were aware of the foods the child preferred and would feed them accordingly.

We only feed the child things that she likes to eat, for example, she enjoys eating roti dipped in milk, so we feed it to her regularly. – Mother's IDI, Nasirabad (rural), Balochistan

1.6 Decision-makers

Summary findings

- Mothers and paternal grandmothers were the key decision-makers for complementary feeding.
- Fathers had a limited role in feeding practices and were in charge of financial decisions.

Mothers, fathers and paternal grandmothers of the child often took decisions regarding complementary feeding. In most cases, separate meals were not prepared. Mothers were found to be the primary decision-makers; however, in many cases decisions of what the child would be fed also rested with the father or grandmother. Decisions regarding frequency and quantity of feeding were still found to rest with the mother as the one who would feed the child, even if the choice of food item to be fed lay elsewhere. This could pose difficulties for mothers.

My husband and mother-in-law are the key decision-makers regarding what the child should be fed. Even if I want to feed him something I cannot make the decision because they raise issues when I try to feed him based on my own choice. – Mother's IDI, Sibi (rural), Balochistan

My mother-in-law decides what to feed the child. She is the one who tells me feed this to the child or don't feed that. Other than her my husband also influences the decision, but it is really up to my mother-in-law at the end. She prefers to feed the child soft foods so that they can easily be digested because my baby is very young [11 months]. – Mother's IDI, Sibi (urban), Balochistan

Where the mother-in-law (i.e. the child's paternal grandmother) was the decision-maker, mothers reported that this often served as a hindrance in being able to feed the child diverse diets.

In Balochistan, fathers made high-level decisions but were less involved in the day-to-day decisions of complementary feeding as they are often away for work or did not know enough about complementary feeding. **Fathers were involved in the financial decisions of the household,** including choosing and bringing groceries for the household. While separate budgets were not planned, fathers accommodated the child's extra expense by making cuts elsewhere.

After my child's birth I had to make changes in the household budget to accommodate for the extra expenses due to the child. For instance, we reduced our household budget by having daal instead of meat. – Father's IDI, Loralai (district), Balochistan

1.7 Influencers and information sources

Summary findings

- Access to healthcare providers was a major concern in most parts of Balochistan, which hindered a parent's ability to get information on complementary feeding.
- When accessible, healthcare providers were found to be insufficiently informed about complementary feeding or were found to be advising the use of branded products.
- At an institutional level, there were issues concerning access to vitamins and medicines, which should be administered to the child.
- Healthcare providers found it difficult to help parents with complementary feeding because of the lack of access to vitamins and medicines, and absence of a forum to communicate with parents.

In Balochistan, the main influencers of decisions on complementary feeding were family elders and the wider community. This is because there were very limited options for information regarding complementary feeding. As a result, people relied on their own communities and the practices of their elders when making decisions.

A few parents mentioned that they got information regarding complementary feeding from doctors or LHWs. However, we found that a large number of respondents in remote communities did not have access to healthcare providers in their communities for health or nutritional advice. Even when parents wanted to consult a healthcare provider especially on nutritional issues such as stunting or wasting, they were not able to do so due to lack of access. This even extended to the provincial capital, Quetta.

I don't have any sources of information; I just use my own judgement. There are a few private doctors here and sometimes people visit for the polio drops, but other than this, no one really comes to us with information. I have never seen an LHW and have never been informed about my child's nutrition or what I should feed her by anyone. – Mother's IDI, Quetta (urban), Balochistan

Under such circumstances, parents and caregivers increased their reliance on home remedies and information from household members to treat both health and nutritional concerns.

Usually we just try to heal the child through home remedies and we avoid going to the doctor unless it is absolutely necessary. Only when the child has been sick for a few days do we take them to the hospital. – Fathers' FGD, Kech (urban), Balochistan

From various accounts, when a healthcare provider was sought for nutritional advice, they were found to either provide incorrect health and nutritional advice or promote expensive dietary products. Therefore, healthcare providers were neither sufficiently informed about complementary feeding nor were they recommending the correct products, often quoting options that were not affordable or sustainable for families.

A few healthcare providers in all divisions did report that they had received some form of training regarding maternal and child nutrition and health, but faced barriers in relaying that information to people. Few parents consulted them on their child's nutritional issues. **At an institutional level, there were issues of access to vitamins (nutritional supplements) and medicines that should be administered to the child, and absence of a forum to be able to communicate with parents.**

It would become easier to provide information to mothers if we were to launch an informational campaign about complementary feeding through Lady Health Visitors, and if mothers were able to leave the house and access information through community programmes.

– Service providers' FGD, Loralai (urban), Balochistan

Some people used television or radio as a source of information; however, these were not available in all communities in Balochistan. In Sibi, Loralai, Khuzdar and Nasirabad districts, respondents mentioned that their household, or even the entire village, did not have access to television.

Even when media was mentioned as a source of information, it was normally with reference to advertisements of infant formula or instant cereal brands. A few mothers spoke about wanting access to more shelf foods for their children – whether Cerelac or bakery items such as cake. This indicates a gap in knowledge regarding dietary nutrition and could be a barrier to healthy complementary feeding.

We get our information from ads on television, through which we know that we should make our children wear diapers, wash hands with antiseptic soap, and feed them Cerelac. This is what we watch every day. Sometimes the doctor tells us what we should feed our child.

– Caregiver's IDI, Khuzdar (urban), Balochistan

Television is not a good source of information about complementary feeding because there are no programmes about this topic on television. – Service providers' FGD, Nasirabad (urban), Balochistan

The absence of verified sources of information, whether through healthcare providers or the media, meant that people relied on their own and the community's knowledge base when making decisions regarding complementary feeding. This led to a mixed bag of knowledge regarding CF practices, and posed a barrier to improving feeding practices in Balochistan.

1.8 Cross-cutting factors: WASH

Most mothers reported that they did not do anything special when preparing meals and feeding their children. Only three mothers mentioned washing their hands specifically before feeding their children; all others either washed their hands once as part of their regular routine. Mothers normally reported washing their hands when they woke up in the morning, after eating, or while washing dishes or clothes. Some people used soap, but most reported washing hands with just water.

Most mothers reported that they washed dishes using plain water, soap, saltwater or dirt. Mothers and caregivers washed the dishes in the same way for all household members and made no special consideration for infants or young children.

I wash my dishes with dirt in cold water. This is because we don't have enough money to afford soap. – Mother's IDI, Nasirabad (urban), Balochistan

We wash our dishes with dirt. With one bucket of water I can wash the whole household's dishes. – Mother's IDI, Sibi (rural), Balochistan

Children mostly drank the same water as the rest of the household. Water sources included water tanker, piped water, wells and underground bores. Some mothers mentioned that they boiled water for the child; some did so during the first year of the child's life and some when the child was sick.

Some CF trends in Balochistan were similar to the rest of the country; however, issues of accessibility, affordability and limited mobility of women emerged as key barriers. Financial constraints, distance from markets, lack of (or incorrect) information from service providers as well as the unavailability of certain medications and supplements all made it difficult for parents to adequately feed their children. Addressing complementary feeding in Balochistan will thus require a multi-faceted solution that deals with multiple stakeholders involved in the process.





GILGIT-BALTISTAN (GB)

FORMATIVE RESEARCH ON
COMPLEMENTARY FEEDING
PRACTICES



1 RESEARCH FINDINGS AND DISCUSSION

Overall, the data reveal only slight variations between rural and urban findings in GB. This can be attributed to the fact that the residents had similar socioeconomic characteristics which formed the basis of their CF practices. Similarly, education levels of mothers and fathers did not emerge as noticeable variables. Perhaps the most plausible reason for this is that most mothers had low education levels and fathers had limited and defined roles in child feeding. Sources of information for complementary feeding and children's nutrition were also mostly the same for both mothers and fathers, which further explains similarities in behaviours and attitudes. Differences by districts and localities are noted where observed.

1.1 Socioeconomic characteristics

Both urban and rural localities were selected, to assess differentials in terms of socioeconomic conditions, accessibility and availability of social services and access to markets. However, in both localities, data was collected from lower and lower-middle income households, representative of the mainstream.

Demographic characteristics were similar between urban and rural localities. Household sizes were large, with an average of 11 people. Joint family structures were common in both urban and rural areas. Education levels varied amongst mothers and caregivers, and it was more likely for older caregivers to be less educated. A small proportion of mothers had not attended school while others had completed

primary or secondary school; fathers were more educated.

In rural settings households depended on employment and agricultural income. Rural employment included working for the government and businesses. The same trend was exhibited in urban areas with the exception of agricultural income.

1.2 Gender roles and responsibilities at household level

In GB as elsewhere in the country, complementary feeding was the primary responsibility of mothers, with fathers responsible for fulfilling livelihood needs and earning incomes. In joint family structures, other family members also contributed to household expenditures and helped care for children. Grandmothers, aunts and older siblings played an important role as caregivers who assisted the mother in tending to babies and young children by cleaning, bathing, changing clothes and feeding. Even in nuclear family units, it was observed that family members like grandmothers and aunts played a significant role in infant and child rearing when mothers were busy with housework or had to go somewhere. Most families lived close by and the grandmother would come over to babysit or the mother would leave the baby with her mother, mother-in-law or paternal aunts.

Table 1: Community perceptions of gender roles and responsibilities

FATHERS' ROLES AND RESPONSIBILITIES	MOTHERS' ROLES AND RESPONSIBILITIES
<ul style="list-style-type: none"> • Fulfilling the needs and expenses of the family. • Buying household groceries and food rations. • Taking care of the family. • Taking care of parents and younger siblings. • Acting as household decision-maker. 	<ul style="list-style-type: none"> • Taking responsibility for all domestic chores such as preparing food for the family, taking care of children, cleaning the house, etc. • Working in the fields and tending to livestock (mentioned in almost all districts).

While women in GB had low levels of employment, they were actively engaged in informal labour in their communities. Women often worked on farms, either by themselves or with community members, and took care of livestock.

Levels of mobility varied in GB. Some women could freely access local markets and visit others in their community, especially in rural parts of GB. This could be because rural communities in GB are very close-knit and people feel safe and secure. Some women, however, were not allowed to leave the house unaccompanied by male family members. Women's mobility had a strong influence on their ability to access food for their household and children.

Community key informants reiterated that men and women had defined roles and responsibilities in terms of running and managing a family, and that complementary feeding was the mother's responsibility with support from female family members (see Table 1). Male family members mostly provided for family needs, including food for the baby as desired by the mother, or according to the child's wishes.

1.3 Breastfeeding and its relation to complementary feeding

Summary findings

- Early initiation of breastfeeding, exclusive breastfeeding and continued breastfeeding were commonly practiced.
- Breastfeeding had little influence on initiation of complementary feeding.

Breastfeeding was fairly common in GB, with almost all mothers reporting through IDIs and FGDs that they breastfed their children at least once if not more.

Irrespective of breastfeeding practices, nearly all household members in GB were aware of the importance of breastfeeding. Breastfeeding was considered crucial for children and most respondents cited the child's health as the main reason. Some of the most common beliefs for breastfeeding were that it is good for the child's health, it fulfils nutritional needs, provides energy, strengthens bones, sharpens mental faculties and minimizes chances of diseases. Mothers said that they did not distinguish in terms of breastfeeding among their children, either by gender or order of birth. Fathers were also supportive of the practice.

*I don't know much [about breastfeeding], I just know that the child should be fed breastmilk.
– Father's IDI, Skardu (urban), GB*

Starting with initiation of breastfeeding, we found that in GB mothers predominantly fed their newborns colostrum and strongly preferred to do so. One of the main reasons was a widely-held belief in this region that colostrum is good for the child's health. Some mothers discarded a small amount because they thought that the very first colostrum is bad for the baby or because it has a "cool effect" (*thandi taseer*), which can make the child sick in the winter. Pre-lacteal feeds were barely mentioned in GB; therefore, we are not able to draw conclusions about the practice.

We found that most mothers (regardless of child's age and mother's location) were aware that the child should be put to the breast immediately or within an hour of childbirth. Despite this awareness, in practice few were able to feed colostrum within an hour of childbirth. Some mothers faced delays in feeding their child due to health concerns. Mothers stated that either they or their child was sick right after birth, and could not feed their child colostrum immediately.

I fed [child's name] and any other child after two hours. The reason being that we have deliveries at home as we don't have a maternity hospital here. It is very difficult to get better [and feed the baby] right after delivery. – Mother's IDI, Astore (rural), GB

Another reason for delayed initiation of breastfeeding was cited particularly in cases where a mother gave birth in a hospital in urban areas and medical staff did not advise them to initiate breastfeeding immediately after birth. For some mothers that meant one-hour delay in initiating breastfeeding because: "this is the amount of time it takes from the hospital to my house" (Mother's IDI, Gilgit urban, GB). Others faced even longer delays.

Most household members and service providers were aware that a child should be fed breastmilk exclusively for six months, but barriers remained. Women generally saw exclusive breastfeeding positively and often believed that breastmilk was enough for the child as it contains

the nutrition that a child needs in the first six months, helps a child grow quickly and contains more energy than any other substitute. The main barrier to exclusive breastfeeding was the misconception that a child can be fed other liquids (particularly water) alongside breastmilk during the first six months.

While mothers were the main decision-makers regarding exclusive breastfeeding, female elders and local healthcare providers were seen as the key influencers of their decisions. Among female elders, the paternal and maternal grandmothers of the child had the greatest influence as they were considered the best informed and most experienced on the matter. Local healthcare providers included LHWs, doctors and traditional healers, none of whom were found to provide correct medical advice consistently.

On the topic of continued breastfeeding, most respondents reported awareness that they should breastfeed their child for two years. In all IDIs, mothers and other respondents including fathers, caregivers and community key informants, were reported to be aware of this practice.

Belief in the importance of breastfeeding stems from an awareness of the health benefits of continued breastfeeding, along with religious beliefs and local traditions. Respondents in GB were aware of the health benefits of breastfeeding for up to two years and believed that breastmilk makes a child healthy, provides them with the energy they need, and makes them stronger and smarter. Breastmilk was also considered to protect a child from infections.

Some household members reported that they should continue breastfeeding for two years because the practice is endorsed in Islam; others believed that it was a religious right of the child, while still others said that it was forbidden (haram) to breastfeed a child after two years.

Islamic tradition guides us to breastfeed the child for two years. – Mothers' FGD, Gilgit (urban), GB

Some respondents also stated that continuing breastfeeding for two years was a tradition in their communities.

The introduction of complementary foods did not influence the continuation of breastfeeding. All mothers sampled for IDIs who were breastfeeding before the introduction of complementary foods continued the practice, although a few reported reducing the frequency and duration of breastfeeding to accommodate other activities.

1.4 Initiation of solid and semi-solid foods

Summary findings

- There were mixed views and practices with regards to initiation of complementary feeding through solid or semi-solid food.
- Local soft foods were popular choices for initiation of complementary feeding.
- Decisions regarding first foods were made by a range of family members, while the mother normally decided when complementary feeding would be initiated.

In GB, there were mixed views and practices with regards to initiation of complementary feeding through solid or semi-solid foods. Most mothers, fathers and caregivers were aware that they should feed complementary foods at six months of age, while a few believed in starting earlier or later than the WHO-recommended time. In practice, many mothers introduced complementary foods to their children at six months of age, as recommended by WHO. Very few introduced complementary foods early at four months, while the remainder introduced complementary foods at seven months. This indicates that people were aware of the importance of initiating complementary feeding and generally familiar with the recommended timeline.

Mothers introduced complementary foods to their children at six months of age because they thought their child was ready for such foods. Some respondents thought that a child's ability to eat and digest foods was ideal at six months, stating that at this age the child's hunger is not satiated with breastmilk alone and he/she can start digesting food. Some parents fed their children complementary foods because they wanted them to start getting used to family foods. Others thought of complementary foods as a vital source of energy and said that a child could become weak if such foods are not fed starting at six months of age.

Local soft foods were a popular choice for the first semi-solid feed. Local foods such as *dowdow* (made from flour and milk) and *shaffay* (semolina cooked in apricot oil), were popular choices, and in Shardu district *sattu* was also popular.

The first food I gave my child was sattu, which is a Balti dish made of flour. According to our elders it is very healthy for the child. My mother-in-law made the decision. – Mother's IDI, Skardu (rural), GB

The quote above also demonstrates a shift in decision-making patterns. In GB, we found breastfeeding was the mother's decision while other family members played the role of influencers. However, other family members were more closely involved in decisions regarding complementary feeding.

Other popular first foods include half and full-boiled eggs, boiled potatoes, mashed bananas, soup, bread dipped in cow milk, instant cereals (like Cerelac) and tea.

Decisions regarding initiation of complementary feeding, particularly the choice of the first solid or semi-solid food item was made by a range of family members. It was often the father, grandfather or grandmother who jointly decided with the mother. There were also instances where a mother decided on her own. In one case, a parental uncle spearheaded the decision, and specially selected, prepared, and brought food for the child when he/she was ready for their first meal. This shift in key decision-makers may be because initiation of complementary feeding is seen as a milestone in a child's life that is often shared and celebrated among family members. Therefore, it may be a sign of respect to defer the decision to a family elder or well-wisher.

However, the decision regarding the appropriate time to introduce solid and semi-solid food was often left to the women of the household, particularly the mother and paternal grandmother, and in fewer instances the paternal aunt of the child. These women were considered well-informed about a child's readiness to consume semi-solid foods and preferred CF practices owing to their experience.

In GB, the decision on when to introduce complementary foods was also influenced by other members of the household, the wider community and the media. When not acting as the decision-makers, the maternal and paternal grandmothers remained key influencers, transmitting information regarding initiation of complementary feeding across generations. At the community

level, healthcare providers including doctors, LHWs, and less frequently, traditional healers (*hakeem*), were consulted. Finally, the media was seen as influencing the decision, but only in case of instant cereals. Respondents reported that instant cereals are a healthy first food due to the information they had received through advertisements on television and radio.

Mothers and caregivers reported that they relied on non-verbal cues to assess whether a child is ready for his/her meal and if the child was full during initial feeds. The main non-verbal cue to initiate complementary feeding was a child crying out of hunger despite having consumed breastmilk. Mothers claimed that they could judge if a child was ready for initiation of complementary food because they would appear hungry. Mothers were not able to elaborate on this non-verbal cue. Some mothers and caregivers mentioned that they started feeding the child when he/she showed interest in food during mealtimes.

During the initiation phase of complementary feeding, mothers most frequently reported feeding their child a variety of solid and semi-solid foods two to three times a day, usually along with breastmilk. When deciding on the quantity of food at this stage, mothers and caregivers usually used non-verbal cues like crying, laughter and sleep to assess whether a child is satiated. Some mothers assessed the quantity of food through trial and error, feeding the child certain quantities and assessing satisfaction to determine the child's eating preferences.

1.5 Complementary feeding practices

Summary findings

- Dietary diversity was low in GB, with most families feeding two or three of the WHO-prescribed categories in a day; attention was paid to feeding different varieties of food but not different food groups.
- Dairy, especially milk, roti and potatoes were common staples.
- Fruits and vegetables were often not fed to children.
- Consumption of shelf foods was lower in GB than the rest of the country.
- Perception of nutritional value of food was an important determinant in choice of food.
- Locally-produced foods such as potatoes were most accessible and affordable and were commonly fed to infants and young children.
- In the winter lack of access reduced consumption of a variety of food.
- Lack of economic opportunities in the winter created issues of affordability.
- Preparation of separate meals for children was uncommon due to time constraints.

In GB, all mothers breastfed their children for some time after birth and continued to breastfeed past the one-year mark. Complementary feeding was also introduced on time, as six out of seven mothers with children aged 6–8 months were feeding their children solid and/or semi-solid foods. This indicates that people were aware of the importance of breastfeeding and generally familiar with the timeline to introduce complementary foods.

1.5.1 Minimum dietary diversity

We found that although women fed multiple food items to their children in a day, diversity in terms of food groups was lacking, with most foods belonging to two or three of the WHO-prescribed categories. Of the mothers sampled for IDIs, six out of 11 breastfed children met the minimum dietary diversity requirement, and the only non-breastfed child in the pool also exhibited minimum dietary diversity.

Amongst breastfed children, some aged 6–11 months met minimum dietary diversity criteria as did most children aged 12–17 months. Very few children aged 18–23 months met the criteria for minimum dietary diversity, with five food groups consumed the previous day. **No significant pattern emerged when looking at mother’s education, father’s education, income level (proxy by house type), and locality (urban/ rural).**

The highest diversity in food groups was seen in three different households but was not consistent over a two-day period. During a one-day period, a highly diverse diet for a breastfed child under two years of age in GB included banana, boiled egg, *roti*, *khichri*, grapes, potatoes, vegetables and meat. Conversely, during the same period, a low diversity diet for a breastfed child aged six months in GB included tea, *dowdow* and *roti*. There was no pattern regarding when a child was fed, as it seemed largely dependent on the child’s hunger.

This suggests that **attention was paid to feeding different food items but not different food groups.** There was a heavy reliance on staples such as potatoes, *roti* and milk, and a few mothers fed their children other common products like custard, vermicelli and *firni*. The regional food, *dowdow*, was also to children fed by mothers. Apples, grapes and other vegetables were also mentioned, and a couple of mothers fed Vitamin A-rich carrots to their children. Potatoes, including in the form of chips, were also part of the diet. Mothers cited reasons such as weight gain, availability, and nutritive value, for feeding their children potatoes.

15.2 Minimum meal frequency

The minimum acceptable meal frequency for breastfed children aged 6–8 months is two meals a day. In GB, most breastfeeding children consumed two or more meals. Similarly, four out of five breastfed children aged 9–23 months met the minimum acceptable meal frequency of three. Non-breastfed children aged 6–23 months should consume at least four meals a day; in GB the only non-breastfed child in the sample met this criterion.

1.5.3 Minimum acceptable diet

Analysing dietary habits over a 14-day period showed that **dairy (especially milk), *roti* and potatoes were common staples.** Dairy and dairy products were generally considered to be good for a child’s health. Most mothers included dairy in their list of foods in a balanced diet and believed it to be good for bone strength and height.

Grains, roots and tubers, such as *roti*, rice and potatoes were also common staples for young children’s diets. Such foods formed part of the staple diet because they were affordable and accessible. They were also believed to have nutritional benefits, for instance, some mothers explained that *roti* enabled growth, while rice was considered important, especially when a child had diarrhoea.

Fruits and vegetables were also considered important, however a few mothers claimed that they could not feed children fruit because of the weather, and found it easier to give them potatoes and vegetables, as these were easily available in GB. Banana was highlighted for brain development and strength. Although not a local product, one mother claimed that it was easily available from the market and her child was fond of it.

At home we have potatoes, meat, milk, and fruit like bananas, so we feed these. We buy bananas from the market and children like them. We try giving our children different kinds of foods so that they eat well and are strong. – Mother's IDI, Skardu (urban), GB

*Grains, vegetables, fruits, nuts are all essential for a child's health. Milk and bananas sharpen a child's mind, and eggs provide strength. Fish and meat are important for nutrition.
– Mother's IDI, Astore (rural), GB*

Almost all respondents in GB stated that food diversity was limited in this mountainous region due to a lack of availability (and subsequently affordability) of food items that were not produced locally. **Locally-produced foods such as potatoes and several fruits and vegetables were easily and inexpensively available** from the market and in their kitchen gardens. However, other fruits and vegetables, staples and meats that were not produced in GB were often expensive and difficult to find.

The main difficulty is that we have to buy a lot of the food products from the market [i.e. not their own produce] and these things are quite expensive, so it becomes difficult to buy. On the other hand our homegrown foods are easy to feed. – Mother's IDI, Gilgit (rural), GB

The problem of accessibility was exacerbated in remote rural communities and by the harsh winter when roads were blocked and markets inaccessible.

Moreover, respondents had **limited information regarding vitamin A-rich fruits and vegetables**. Certain foods with almost no nutritive value, such as tea and biscuits, were also fed by some mothers intermittently.

Very few families fed their children eggs frequently. When asked to describe the kinds of foods they considered healthy for their children, most mothers knew that eggs were an important part of an infant and young child's diet. We found that eggs were seen by some as important for intelligence and considered nutritionally dense, but lack of access inhibited frequent consumption.

In GB meat and chicken were fed once or twice a week at most. We found conflicting opinions about the reasons for giving children meat products. Some parents did not feed their children meat because it was thought to have a *garam taseer*, whereas others believed that it was beneficial for health and promoted growth. Meat was less commonly fed to children in some families and one respondent linked its availability with guests visiting their home.

There was no mention of commercially prepared iron-fortified foods by any of the mothers. Similar to other part of the country, mothers were neither aware of the importance of iron for children nor that meat products contained iron.

Legumes and nuts were not sufficiently fed. Nuts were rarely fed because they were thought to be difficult to chew. Legumes were rarely cooked in the household and therefore not fed to the child.

Few (five of 12) mothers in GB fed their children shelf foods – this was on the lower end relative to other regions of Pakistan, with no visible difference between urban and rural areas. A mother who fed her child shelf foods (once a week) acknowledged that it had no nutritive value. Bread dipped in tea was fed to children because the family was used to having tea frequently and she fed the child what they were consuming.

Children of all ages drank water during the course of the day, and seven mothers said they had given their children medication for fever, cold, and stomach illness.

Overall, mothers chose to feed their children certain food items for three main reasons: perception of nutritional value, availability and affordability. Mothers were keen to feed items which they thought had high nutritional value, but these decisions were based on a combination of correct and incorrect beliefs about foods: roti helps the child grow, eggs give you energy, milk and bananas help child's mind become sharp, milk strengthens bones.

I choose food items that help the child gain strength and gives him nutrition.

– Mother's IDI, Gilgit (urban), GB

However, this motivation was also a hindrance when certain important food items were not consumed due to local misconceptions about the effect. For instance, one mother said that the doctor advised her not to give her child meat before five years of age, another said that lentils were bad for a child's health, rice has a *thandi taseer* and can cause pneumonia in the winter, and that juices can make a child sick.

Several mothers fed their children foods that were easily available. The most accessible and affordable foods were either locally produced, sold in the markets, or homegrown. People in GB often had kitchen gardens or agricultural land, where they grew their own fruits and vegetables. Individuals were reliant on homegrown produce and to some extent they could fulfil a part of their nutritional needs through subsistence farming. Women, while aware of the importance of giving a variety of foods, admitted that they only gave foods that were available at home.

Most of the food I feed is easily available at home, such as vegetables and chicken. Since we grow potatoes as well, I feed my child boiled potatoes and chips. – Mother's IDI, Astore (urban), GB

GB's climatic and geographic features had a profound influence on food choices. In the winter, people relied on stored and imported foods. Imported products were expensive and often unaffordable, reducing household consumption of fresh produce. Mothers mentioned fruits, vegetables and dry fruits as items that were not easily available. Moreover, excessive snow frequently blocked major roads connecting GB to the rest of the country, resulting in severe food shortages, and limiting people's access to their local markets.

It was seen that the local community had developed coping mechanisms, but there were still concerns about children's nutritional needs. With limited food availability in the winter, many infants and young children did not consume an adequate amount of food in the winter and the situation was even more severe in rural areas.

There are only two shops here, which are very far away. We won't get food items [during winter] and often we have to beg our neighbours to give us something to eat. For 4-5 months [of winter] we get cut off from sources of basic foods and we rely on wheat, rice and potatoes.... Balanced meals are just a dream, we rely on our own limited agricultural produce in the summers and on lentils and flour that my husband brings when he comes home from his job in the army. – Mother's IDI, Astore (rural), GB

In addition to food security concerns, people also mentioned that economic opportunities plummeted during winter. Even food preparation and feeding habits were influenced by the severe cold; mothers claimed to prepare food only once a day in the winter, whereas they prepared fresh food in the summer.

In general, parents felt that while they had knowledge about a balanced diet for children, they could not afford to buy food items. They could only afford inexpensive locally-produced foods, which was a constraint to meeting minimum dietary diversity, frequency, and adequacy.

We normally don't have money which is why we cannot buy any nice foods for our children. A lot of things are available in this area for children but we cannot afford to buy them. My mother-in-law also often stops me from buying things for my children. – Mother's IDI, Skardu (urban), GB

*We don't have money, if we had money we would feed our child everything.
– Fathers' FGD, Gilgit (rural), GB*

Women's mobility varied in GB. Some women mentioned that they could freely access their local markets and visit others in their community, mostly in rural areas. Others, however, were not allowed to leave the house without the company of men from the family. **Women's mobility had a strong influence on their ability to access food for their household and children.**

Preparation of separate meals for children was uncommon in GB; many mothers noted that they had too many responsibilities and were often too busy to prepare separate meals. Some of the pressures were related to household chores such as cooking and cleaning, and in the summer there was the additional pressure to work in the field. For instance, when mothers became involved in potato harvesting, they had limited time to spend on household chores or on their infants.

For the same reason, mothers fed their children foods that the child would easily eat. This was often according to the child's preferences, which hindered a child from eating diverse and nutritious foods. Mothers often reported following their child's preferences without much resistance. This led to some detrimental eating habits, including eating shelf foods.

Several mothers indicated a large family size was a barrier to providing a balanced diet for infants and young children. Women and men alike agreed that most families were dependent on one earner with limited income. This single income had to meet the needs of a family of 7–8 people and sometimes even more.

1.6 Decision-makers

Summary findings

- Mothers and paternal grandmothers were key decision-makers for complementary feeding.
- Fathers had a limited role in feeding decisions but were in charge of financial decisions.

Decisions regarding continued complementary feeding, beyond initiation of complementary foods, were often taken by mothers and female caregivers of the household. Fathers were less

involved in these decisions because they were often away for work. In a few households, children were fed planned meals every day and mothers and caregivers contributed to the planning process. In most households, however, the decision of what to feed the child happened on a daily basis with special foods prepared only in some cases. Often, because of time constraints, mothers and caregivers did not prepare special items and fed children family foods.

We found that very few fathers interviewed played an active role in CF practices – marginally more than in other parts of the country, but still in a very limited role. Fathers suggested in FGDs that they took care of and fed their children occasionally, but did not see this as their main responsibility. Fathers also occasionally suggested complementary foods for their children, and it was the mother who normally decided what to feed the child. However, most fathers had little or no information about what their children were fed. We found that this was because they were usually outside the house all day or sometimes for longer durations (when they were in other parts of the country) to earn a living.

Fathers were responsible for financial decisions in the household, including deciding on and bringing groceries for the household. None of the individuals interviewed mentioned a separate budget for their child's meals. This is in line with the finding that the father was often unaware of what the child was fed, but it may also be because nothing special was being prepared for the child.

1.7 Influencers and information sources

Summary findings

- Female family elders were the most common and preferred sources of information regarding complementary feeding.
- Healthcare providers like doctors, LHWs and traditional healers were an important source of information, though few mothers consulted them specifically for child nutrition concerns.
- Community gatherings were an important source of information in urban centres.
- Television was a common source of information.

Household members, community and health care providers were a key source of information on complementary feeding. Female family elders like mothers and mothers-in-law (the maternal and paternal grandmothers of the child), as well as other female relatives like sisters and sisters-in-law were the most common and preferred sources of information on complementary feeding and child nutrition, including health problems experienced by young children. Women in all districts said that their knowledge of appropriate foods was based on information from experienced women in the family and neighbourhood.

Female elders were also mindful of transferring their knowledge and experience across generations when it came to CF practices. This knowledge was based on personal experiences and information passed down to them from their elders. Therefore, a lot of local beliefs about complementary feeding came from regional traditions.

Healthcare providers like doctors (mostly general practitioners), LHWs and *hakeems* were also mentioned by a significant number of mothers and caregivers. LHWs were mentioned almost as frequently as doctors, potentially because LHWs are quite active in remote communities where it might be difficult to access doctors.

People consulted healthcare providers based on how much they trusted them. Some preferred to consult traditional healers and religious leaders and to try home remedies first, and then consult a doctor if a child did not get better. Others preferred to go to the doctor first, and then consult religious leaders or try home remedies if the condition became severe. These decisions were based on how much people trusted their providers, the physical distance and personal preference.

Normally, mothers and caregivers took their children to the doctor when they were sick. Very few mothers took their babies for weighing or height measurement unless the healthcare provider suggested it. It was observed during data collection that many children seemed underweight and weak but parents neither consulted a healthcare provider for this purpose and nor were they addressing the problem in any other way. Mothers with infants or children who had low weight or poor nutrition usually took them to religious leaders (maulvi) or read Islamic surahs for protection and healing. Only one mother consulted a doctor about her child's nutrition because the child was very weak.

Community gatherings were also an important source of information in urban centres, which appeared to be quite common in GB. Caregivers mentioned that they had attended a community gathering in their local public school. This was hosted by local doctors who informed them about their infant and mother's health and nutrition. The main message was to enable community members to take better care of infants and mothers, and help their children grow and flourish. However, it was mentioned that the doctor also promoted the use of expensive infant milk which the community members could not afford.

Relatedly, lack of adequate knowledge about CF practices through proven sources was mentioned by some interviewed mothers and fathers, who had to rely on intergenerational knowledge transfer for information. Fathers mentioned that this meant that parents often did not know what they should feed their children and what would constitute a balanced diet.

Electronic media was a popular source of information on complementary feeding. As most women were uneducated or poorly educated, print media like newspapers and magazines were hardly discussed by respondents. A number of mothers instead mentioned television as a source of information on child nutrition and complementary foods for healthy development of young children. A major source of information on the electronic media was advertising for Cerelac and formula milk which provided information on initiation of complementary feeding at six months, as well as soap advertisements which gave messages on the importance of handwashing and use of soap.

Radio was mentioned as a source of information by one father living in a remote community with no access to television. This father mentioned that they used radio for information about feeding practices and nutritional information.

1.8 Cross-cutting factors: WASH

Summary findings

- Children often used the same water as the rest of the family, with use of spring water common.
- Handwashing was claimed to be a regular habit, however, very few mothers or caregivers mentioned handwashing before handling the baby.
- People were aware that waste should be properly managed to avoid spread of infections.

All respondents had fairly a good idea about acceptable WASH practices. However, gaps were identified in case of handwashing practices and general hygiene and cleanliness practices specific to infants and young children's feeding utensils including milk bottles.

Children often used the same water as the rest of the family. The use of spring water was fairly common in GB and people often knew if their water source was safe as it had been tested by local NGOs. There were cases where the spring water was found to be contaminated, in which case people cleaned the water, mostly by boiling it. In some cases, water was transported to people's homes through pipes, but for others water was fetched from the closest spring or stream. Some people were found to use bottled water as well.

Handwashing was claimed to be a regular habit by all, especially before eating and cooking, after working in the field, after using a toilet and after cleaning including cleaning the baby. However, very few mothers or caregivers mentioned handwashing before handling the baby. There was mention of the use of soap, but it was mostly in relation to dishwashing and not necessarily for personal hygiene. Some mothers and fathers recognized the challenges of maintaining cleanliness in the household.

Cleanliness is half of faith. The house and children should be clean, however, in our household women are really busy so they are not able to clean up after the child properly. – Fathers' FGD, Astore (urban), GB

People were aware that waste should be properly managed to avoid spread of infections. The most frequently mentioned forms of waste and garbage management were by burning garbage, disposing it in a running stream or throwing it in the fields.

1.9 Cross-cutting factors: Social protection

Summary findings

- Cash transfer made it easier to manage household expenses, including expenditure on young children.

Only a small number of selected respondents and group participants were BISP beneficiaries. Those who received the cash transfer stated that it made it easier to manage household expenditure and allowed them to spend on their children's health and education. Key informants and beneficiaries also mentioned that BISP cash transfer helped improve the household's health-seeking behaviour because it enabled people to consult healthcare providers more frequently.

In GB, as with the rest of the country, there was some uncertainty about correct practices associated with complementary feeding, especially with regards to meal diversity. However, unlike other regions, in GB there was a significant issue of accessibility, not only because of seasonal variations but also because of geographic limitations and sparse population density, especially in rural areas. Over-reliance on local produce amidst severe weather conditions, along with lack of proper information, were significant barriers to achieving recommended CP practices.





KHYBER PAKHTUNKHWA (KP)

FORMATIVE RESEARCH ON COMPLEMENTARY FEEDING PRACTICES



1 RESEARCH FINDINGS AND DISCUSSION

1.1 Socioeconomic characteristics

Demographic characteristics were similar between urban and rural communities in KP. Education levels were very low amongst mothers and caregivers, while fathers were more educated, with most having school education followed by a significant number with intermediate (Grade 12) education.

In rural areas, most households were either dependent on daily labour or farming, mostly as farm labour or tenants working on others' lands. In urban areas, manual labour and small businesses were most common occupations. Respondents in FGDs and interviews, regardless of urban or rural locality, complained of high unemployment and scarcity of labour work which created economic problems for the family.

The majority of respondents lived in small housing units comprising two or three rooms with small outside sheds or spaces as kitchens. The construction was mostly unbaked bricks with partial cemented or baked structures. In some rural communities, women reported having no latrines at home and having to defecate in the open.

This study reveals few variations between rural and urban findings which can be attributed to the fact that residents of both localities had similar socioeconomic characteristics. Furthermore, **most urban residents were actually first-generation rural migrants with similar characteristics to current rural residents.** Whilst education levels of mothers and fathers had been assumed to be a key determinant of infant and young child feeding, this did not prove to be the case. This may be because most mothers had low education levels and fathers with better education had only limited roles in child feeding. The sources of information for complementary feeding and

children's nutrition were also mostly the same regardless of education, which further explains similar behaviours and attitudes.

Female mobility patterns varied according to urban/rural locality and by district. By and large, women had restricted mobility, but in urban Peshawar, Dera Ismail Khan and Swat, many women said that they could go out as they wanted but only in groups or escorted by a male family member. In Abbottabad, Bannu, Kohat and Mardan women were not permitted to go out unless accompanied by a male family member. Similarly, rural women generally could visit neighbouring houses or nearby health facilities but were not encouraged to go alone. **As a result, the restricted mobility of women in KP emerged as a barrier for many communities in terms of women's access to health services and markets, which can impact on family nutrition and health status.**

1.2. Gender roles and responsibilities at household level

Complementary feeding was the primary responsibility of mothers, with fathers responsible for fulfilling livelihood needs and earning an income. Joint families were quite common and in these cases other family members also contributed to household expenditures and caring for children. Grandmothers, aunts and older siblings played an important role as caregivers for babies and young children. Even in nuclear family units, family members like grandmothers and aunts helped with child rearing whilst mothers were busy with housework, as most families lived close by.

Table 1: Community perceptions of gender roles and responsibilities

FATHERS' ROLES AND RESPONSIBILITIES	MOTHERS' ROLES AND RESPONSIBILITIES
<ul style="list-style-type: none"> • Earning a living and fulfilling the needs of the family. • Buying household groceries and food rations. • Taking care of the family, protecting them and providing security (emotional and physical). • Taking care of parents and younger siblings. • Fulfilling children's education needs (mentioned specifically in Mardan, Swat and Kohat). 	<ul style="list-style-type: none"> • Taking responsibility for all domestic chores, like preparing food for the family, taking care of children, cleaning the house, etc. • Tending to livestock (rural Abbottabad and Swat). • Managing children's schooling and everyday education needs (urban Mardan and Abbottabad).

None of the fathers who were interviewed or participated in FGDs mentioned attending to infant and young children's needs including any specific mention of the health or nutrition needs of the entire family. **It was common in many homes for the father to feed the baby occasionally if he was available, but it was apparent that this was not a regular practice.**

Fathers also sometimes feed the baby if they are at home and the mother is busy doing other household chores. But normally it is the mother who feeds the baby and is responsible for preparing meals for the family including the baby. – Fathers' FGD, Swat (rural), KP

As fathers and other male family members mostly engaged with the baby during recreational time, some of the mothers pointed out that **fathers were among the main channels for introducing shelf foods like crisps, *papar*, biscuits, candies and packaged juices**. Because of limited female mobility in most communities, male family members were the ones to take the child out and usually bought packaged snacks to please him or her.

My father-in-law sometimes takes my son out in the evenings for a stroll and usually my son returns with biscuits or chips in his hand. Afterwards he refuses to eat his dinner as his stomach is already full.

– Non-breastfeeding mother’s IDI, Mardan (rural), KP

Basically, it all comes down to the economic conditions of the family. If the family has adequate income then the mother usually informs the father and he either brings home the required item or gives her the money to get it herself or ask some else in the family to get it. Mothers who work don’t need to ask anyone or their husbands for money and spend their own money to fulfil their children’s needs including food items for babies and young children. – Social activist, female community KII, Swat (urban), KP

All seven fathers participating in IDIs in rural and urban localities stated that it was the mother who decided what to feed the baby; they had no role in this.

Thus, infant and young child feeding was directly attributed to mothers by mothers, fathers, caregivers and service providers alike. Although respondents agreed that other family members influenced their decisions regarding children’s nutrition, everyday decision-making and feeding at mealtimes was mostly performed by the mother.

I don’t decide what to feed the baby. My wife or mother decide what to cook or prepare for the baby. They tell me what to get and I just buy it from the market. They know better because they know more about the baby’s diet. – Father’s IDI, Mardan (urban), KP

Fathers have little role in actually feeding the baby or young child. It is mostly the responsibility of the mother. Sometimes, while playing with the baby, fathers also feed it or buy special foods like fruits, biscuits, or Cerelac once in a while when they go to the market. But primarily it is the mother who decides which foods to give to the baby. – Service providers’ FGD, Abbottabad (urban), KP

1.3 Breastfeeding and its relation to complementary feeding

Summary findings

- Breastfeeding was the preferred method of feeding a baby from birth to at least two years of age.
- Breastfeeding was endorsed as the correct way passed on through generations as the right practice, and widely promoted by healthcare providers as being highly beneficial for the baby.
- Only a small number of mothers reported initiating breastfeeding within one hour of childbirth.
- The concept of exclusive breastfeeding was based on inaccurate knowledge as mothers and caregivers fed babies pre-lacteal feeds after birth as well as other liquids in the first six months.

Breastfeeding was almost universal and the preferred method of feeding a newborn or a young child. All respondents and group participants agreed that breastfeeding was the accepted and desired way of feeding children unless there was a health related problem, which prevented the mother to provide breastfeed to her baby.

Of the IDIs with 14 mothers who were not currently breastfeeding their children aged 6–23 months, only one mother said that she had not breastfed her baby at all due to medical problems. The remainder had discontinued because their breastmilk had become insufficient, for medical reasons, or, in a noticeable number of cases, due to another pregnancy. It was a common misconception that breastmilk becomes unfit for consumption if the mother becomes pregnant.

Breastfeeding was endorsed by tradition as the correct practice and widely promoted by healthcare providers as highly beneficial for the baby. **Mothers, fathers and caregivers in all districts said that they were fully aware of the benefits of breastfeeding** and were also advised by their elders about its benefits.

I was told by my mother and mother-in-law about the usefulness of breastfeeding and now I have passed on the same wisdom to my daughters and daughters-in-law. – Caregivers' FGD, Bannu (rural), KP

A noticeable number of men and women also referred to religious endorsement of breastfeeding as the baby's right.

*Islam also tells the importance of breastfeeding. Our Prophet (SAW) also tells all Muslims to breastfeed their children as Allah has given this function to mothers for a reason. Breastmilk provides all the required nutrition to the baby and should be given to all babies until they are two years old.
– Mothers' FGD, Peshawar (urban), KP*

The positive properties commonly attributed to breastmilk by both mothers and caregivers were that it is easily digestible; boosts bone and general health of the baby; is pure and clean; and is easily available and convenient to use.

However, **only a few respondents and group participants reported breastfeeding the baby within an hour of birth.** In most instances women reported that breastfeeding had been initiated after 2–3 hours after birth, with some claiming several hours after birth or even a few days later. Amongst the 28 mothers who participated in IDIs, four who were not currently breastfeeding and five who were currently breastfeeding said that they had initiated breastfeeding within one hour of birth.

There was growing awareness amongst both mothers and female elders about the benefits of feeding colostrum to the baby but in many communities, **mothers and caregivers continued to have misconceptions about colostrum being “dirty” and needing to be thrown away or dried up before the baby was put to the breast.**

Family elders instructed mothers on when to start and whether or not to feed colostrum to the baby. Facility-based births had higher incidents of early initiation of breastfeeding compared to home deliveries, although a few mothers reported being instructed by traditional birth attendants to initiate of breastfeeding early and to feed the baby colostrum.

My mother-in-law told me about breastfeeding the baby soon after birth and the importance of colostrum. Colostrum, my mother-in-law and the doctor at the hospital say, is a lifesaver for the baby which protects it from all diseases and strengthens the bones. – Mother's IDI, Kohat (rural)

Colostrum helps in strengthening the baby's immune system and cleans up her stomach, which needs cleansing after birth as there is blood in it for which the first breastmilk (colostrum) is very important. We encourage the women not to waste the colostrum and give it to the baby immediately after birth and until the regular flow of milk starts. – LHW service providers' FGD, Peshawar, KP

Pre-lacteal feed or *guthi* remained common despite increased awareness about exclusive breastfeeding. Elderly female family members usually administered *guthi* using honey, *gurh* (jaggery) with green tea, or packed *guthi* available in the market. Although, a few respondents and many service providers said that they generally discouraged use of *guthi*, the tradition was commonly practiced.

My mother-in-law gave honey and green tea to our baby right after birth. But my husband came and told her not to give it to the baby as the baby should just be given mother's milk until six months of age.
– Mother's IDI, Swat (rural), KP

While most women gave the correct response that exclusive breastfeeding was giving breastmilk to the baby until six months after birth, a significant number of babies were given pre-lacteal feeds as well as green or black tea for three or four days after birth when colostrum was not given. Amongst the 28 interviewed women, only eight said that they had not given their babies anything except breastmilk after birth. A number of mothers also gave supplementary milk or other liquids during breastfeeding throughout the first six months of life.

Mothers, mothers-in-law and healthcare providers such as Lady Health Visitors, LHWs, doctors and traditional birth attendants guided new mothers about breastfeeding practices including initiation, breastfeeding and frequency. In one case, a young mother from rural Kohat said that she started to breastfeed her baby properly after ten days of birth as she just did not know how to do it and the baby would keep crying because he remained hungry. Finally, she got the hang of it with help from her mother.

All men, women and service providers promoted continued breastfeeding for two years or even two-and-a-half years. In most instances, mothers breastfed their babies for as long as they had milk, but weaned the baby in case of a health issue or another pregnancy.

A number of mothers in both rural and urban localities (Kohat, Swat, Bannu and Dera Ismail Khan) said that they continued breastfeeding their children or breastfed them more frequently because they could not afford to feed them anything else. A mother of two young children in rural Swat, one aged 36 months and other 23 months, breastfed both because her husband was unemployed and they could not afford to buy food for the babies. It was observed that both children were very pale and seemed underweight, while the mother herself was weak and sickly in appearance. It was also common to breastfeed on demand rather than at designated times. Mothers and caregivers agreed that infants needed to be breastfed more frequently as they did not consume any other food.

I breastfeed the baby whenever he cries as I know that he is hungry.
– Mother's IDI, Dera Ismail Khan (urban), KP

1.4 Initiation of solid and semi-solid foods

Summary findings

- Most mothers and caregivers reported initiating semi-solids after six months, with only a few who mentioned starting complementary feeding earlier or later.
- Mothers and caregivers were of the opinion that mothers became aware that the baby was ready for semi-solids when it cried more and demanded more milk.
- Common soft foods recommended during initiation of complementary feeding were Cerelac, *kheer* or *firni*, rice, bananas, *roti*, *nisasta* and fresh goat or cow milk.

According to a majority of participants and respondents, semi-solid foods were given to the baby after six months with the exception of some who gave varying responses: 3–4 months and 8–9 months respectively. Fathers were less sure about the exact age at which to initiate complementary feeding. Most fathers participating in FGDs said the baby was given semi-solids at 4–6 months, followed by 7–8 months. A few in Swat, Dera Ismail Khan and Bannu said 8–10 months.

The baby is given semi-solids when he or she is able to sit up. My wife started giving food to our baby when he was able to sit on his own. – Father's IDI, Peshawar (rural), KP

*I started giving my baby soft food like dalia, mashed banana and Cerelac when she was three months old. After initiating soft foods, she had less milk – only 4–5 times a day, otherwise I was breastfeeding her at least 10–12 times a day. Gradually I have weaned her completely now.
– Non-breastfeeding mother's IDI, Swat, KP*

A first-time mother in urban Kohat narrated that she started giving soft foods to her baby, when he was two-and-a-half months old, as a result he became sick and had to be taken to the doctor for treatment. Her mother-in-law had told her to start complementary feeding because she herself had started her babies on semi-solids at the same age.

Mothers and caregivers were of the opinion that mothers became aware when the baby was ready for semi-solids as it cried more and demanded more milk, which meant that breastmilk was no longer sufficient for its needs.

At around 6–7 months, mother's milk or even supplementary milk is not enough for the baby, not just for its hunger but also for its proper growth and development. – Mothers' FGD, Bannu (rural), KP

Common soft foods recommended during the initiation of complementary feeding were Cerelac, *kheer* or *firni*, rice, bananas, *roti*, *nisasta* (liquid wheat *halwa*) and fresh goat or cow milk mentioned by most mothers, caregivers and fathers alike. Other soft foods suggested by participants were potatoes, boiled rice and *khichri*, *yakhni*, eggs and *dalia*.

1.5. Complementary feeding practices

Summary findings

- There was a high level of awareness about the importance of food diversity for infants and young children and what a balanced diet for young children should comprise.
- Amongst the seven main food groups, most respondents and group participants mentioned at least five groups. None mentioned legumes and nuts or Vitamin A-rich fruits and vegetables except carrots and eggs, which are also a separate food group.
- Mothers and caregivers agreed that children required food diversity as they got bored with the same food at every meal or if given very frequently.
- A number of mothers and caregivers had misconceptions regarding food diversity, and understood it in terms of taste rather than nutritional value.
- Economic barriers were the most common reason that prevented parents from providing the desired diet to their children.
- Babies were fed on demand and after one year of age were given the same food as the rest of the family.

1.5.1 Minimum dietary diversity

A high level of awareness was evident amongst all stakeholders about the importance of food diversity for infants and young children and what a balanced diet for young children should comprise. Amongst the seven main food groups, most respondents and group participants mentioned at least five groups. However, none mentioned legumes and nuts, or vitamin A-rich fruits and vegetables, except carrots, and eggs, which are also a separate food group. The only nuts mentioned were peanuts, mostly in districts where winters were more severe (Swat and Abbottabad) and people generally consumed nuts. Of these peanuts were more affordable and accessible.

Regardless of age, locality and education levels, mothers, fathers and caregivers agreed that children required milk, meat, eggs, fruits, vegetables and water as part of a healthy diet. Some also mentioned yogurt, butter and ghee as nutritious for young children but no one mentioned cheese. It was obvious that certain food items like nuts, legumes, cheese or foods rich in vitamin A are not traditionally consumed in KP, to some extent because of affordability. For example, nuts are costly and beyond the resources of most people. Similarly, red kidney beans are widely available high-protein legumes, but were not mentioned by respondents as a food given to for infants and young children.

Mothers and caregivers agreed that children including infants required food diversity as they got bored with the same food at every meal or if given very frequently. **Of 28 interviewed mothers, 21 were of the opinion that food diversity was very important for child's healthy growth, yet little effort was made to achieve diversity.** Mothers rarely prepared special meals for infants and young children or just made one special food which they gave the baby repeatedly during the day, in addition to regular family food during mealtimes. Ten interviewed mothers and three caregivers out of seven reported preparing special food for the baby daily but the number of times was not clearly

reported. This included Cerelac, which was reported by a vast majority of parents and caregivers as well as service providers. In fact, community-level stakeholders said that Cerelac was recommended by healthcare providers as well as by LHWs.

My mother had told me that for a baby aged 6–8 months, the ideal foods were Cerelac, bananas and potatoes as they are easily digestible and good for baby's growth.
– Caregiver's IDI, Dera Ismail Khan (urban), KP

Certain misconceptions were also common regarding food diversity. **Some mothers and caregivers were of the opinion that to add diversity, they needed to give babies both sweet and salty foods.**

Moreover, the foods consumed by infants and young children in the last 48 hours before the IDIs stood in contrast to mothers' knowledge of food diversity. There were almost no variations between currently breastfed and non-breastfed children.

The most common foods consumed in the last 48 hours were milky tea, black tea (kahwa), eggs, *roti*, breastmilk or supplementary milk, vegetable curries (cooked for the rest of the family), biscuits and *papar*. In a number of instances, bananas and guavas were also mentioned as well as Cerelac.

I took out the potatoes from the curry and washed them in water, mashed them and gave to the baby. – Currently breastfeeding mother's IDI, Peshawar (rural), KP

While most respondents agreed it was important to give water to the child, they mostly did so if the child asked for it or if the mother felt that the child was thirsty. "If the baby's lips become dry, the mother knows that the child is thirsty", otherwise, mothers or caregivers hardly remembered to give water to the baby after complementary feeding had been initiated.

1.5.2 Minimum meal frequency

Meal frequency varied from 2–3 times a day to 3–4 times a day, but **in most instances mothers and caregivers said that children were mostly fed on demand and there were no designated meal times.** The quantity was also determined by the child who was usually fed until she or he refused to eat any more.

I know when she is full and does not want any more food because she starts to spit out the food once she is full. – Mother's IDI, Mardan (rural), KP

In case of older children aged 12–23 months, other than supplementary or breastmilk children were not given a special diet and usually ate the same food as the rest of the family. Mostly, mothers or caregivers put less spices in the meal or took out a portion for the baby while cooking before adding spices. This was also confirmed by most key informants and service providers who attributed the fact that that mothers and caregivers gave the same food to infants and young children as the rest of the family to economic reasons and a certain level of apathy.

I soften roti in the curry or mash it with the regular food cooked for the family like vegetables or daal and give it to the baby. We can't afford to buy special food for the baby everyday as we don't have the resources. My husband is a daily wager and at times it is even difficult to have two square meals a day for us. – Currently breastfeeding mother's IDI, Swat (urban), KP

1.5.3 Minimum acceptable diet

Seasonal preferences were practiced to a significant extent when feeding children. Only six of the 28 mothers interviewed said that they were consistent in food variety regardless of season. The remainder said that they avoided giving eggs, potatoes, peanuts, and *yakhni* during the summer as these were considered “hot” and difficult to digest. Instead they preferred giving cool foods like yogurt, lassi and kheer in summer as these had a “cool” effect on the digestion.

*In winters, children should not be fed bananas, yogurt and rice as it is not good for their digestion.
– Mother’s IDI, Dera Ismail Khan (rural), Swat (rural), Mardan (rural)*

Fish, yakni, eggs and dalia are not good in summer as they cause heat in the intestines and digestive system. – Mother’s IDI, Mardan (urban), Peshawar (urban), Bannu (rural)

Meat and fruit consumption was limited due to expense. Meat was consumed only occasionally in case of a special event. In case of fruits and vegetables, priority was given to affordable and available items. For example, bananas were given to babies in Kohat, Mardan and Peshawar during the peak season but not in Swat and Abbottabad due to higher prices. Similarly, guavas were grown in the southern districts of Kohat and Bannu but were not easily accessible in Malakand where apricots and peaches were more accessible to the local population during the summer.

KIs and FGDs with service providers also revealed that **although many parents and caregivers considered Cerelac an ideal food for young children, they could not afford to give it to the baby on a regular basis.** Mostly, mothers bought sachets of Cerelac which cost around Rs 15, and made a single meal for a child of 8–10 months. However, usually mothers used the single-meal sachet for three to four meals diluting it with more water.

Consumption of junk foods by young children was a common practice in all communities, and parents did not prevent children from eating biscuits, crisps, *papar*, etc. Although a number of mothers complained about the consumption of junk food and its effect on appetite, they were unable to manage it.

*My two-year-old just walks to the corner shop near our house and buys chips and sweets on his own. Then he doesn’t eat his food properly because he has already consumed so many biscuits or chips etc. The shopkeeper knows us so he doesn’t even ask him for money and just informs us later about the cost.
– Currently breastfeeding mother’s IDI, Mardan (rural), KP*

Adequate food quantity, as mentioned earlier, was determined by the baby’s need or hunger. It may be assumed that as children mostly ate with the rest of the family, the amount they ate was not necessarily observed.

Feeding young children is a difficult task because they keep moving around and take their time in eating. One really needs to engage them and then feed them. – Caregiver’s IDI, Abbottabad (urban), KP

Gender discrimination or bias was not evident in CF practices. **Fathers, mothers and caregivers alike said that for them there was no difference between the upbringing of a son or daughter, including the foods they were given.** However, a few parents separately said that they gave more attention to their daughters as they felt that it was more important for a girl to have better health as she was a future mother and to have healthy children and to care properly for her family she needed to be strong and healthy herself.

1.6 Barriers and enablers to complementary feeding

The most prominent barrier mentioned by respondents and group participants in all seven districts was economic, followed by large family size, access to quality food products, limited female mobility and finally lack of adequate information which was mentioned by a noticeable number of mothers.

1. **Economic limitations** in meeting the nutrition needs of young children were equally mentioned by key informants and service providers. Parents felt that while they had sufficient knowledge about a balanced diet for children they could not afford to buy special food items for young children, especially fruits, meat, Cerelac, and a variety of other food items.
2. **Large family size** was indicated by several mothers as a barrier to providing a balanced diet to infants and young children. Women and men alike agreed that most families were dependent on one earner whose limited income supported 7–8 people and sometimes more.
3. While some mothers and fathers said that access and affordability of children's food was not an issue for them, such parents were insignificant compared to those who had **difficulty in accessing markets and, even more so, difficulty with affording food items**. Several rural mothers and caregivers said that the local shops did not have fresh fruits and vegetables, and shops selling fresh products were quite far from their villages. Even in the provincial capital, urban Peshawar, mothers and fathers complained about lack of markets where they could buy quality and affordable food items for the family.
4. **Restricted female mobility** was mostly mentioned by women in urban areas and by a few in rural Swat and Kohat. Mothers felt that as they were not permitted to go out on their own or without permission from their husbands, they were dependent on others, mostly male family members, to buy groceries.

If women were allowed to go to the market on their own, they would know what is available and fresh and would be able to buy appropriate fruits and vegetables for their children and family. But in our society females are not allowed to go out without being accompanied by a male family member. So I just ask my husband or brother in law to buy groceries.

– Mothers' FGD, Dera Ismail Khan (urban), KP

5. Although, **lack of adequate knowledge about complementary feeding** was mentioned by a small number of women in mothers' FGDs, it was a significant barrier mentioned by both community and healthcare key informants. Lack of knowledge or information was reflected also by general healthcare providers who were not properly trained to address child health and nutrition problems. The general awareness level of parents was quite high but they did not know ways to address or meet the nutrition needs of their children through low-cost affordable means or by substituting supplementary packed foods with homecooked meals.

1.7 Influencers and information sources

Summary findings

- Female family elders, like mothers and mothers-in-law, played a key role in influencing CF practices.
- The print media had almost no role in influencing parents and caregivers' behaviour and attitudes due to low education levels. However, television was mentioned as a source of knowledge with special reference to commercials and some cooking shows.
- LHWs and general physicians were also mentioned by mothers and caregivers as sources of information regarding adequate diet including diarrhoea management.
- Health facilities were generally available and accessible in all studied communities, however, people mostly visited general physicians or low-cost private healthcare providers who had limited knowledge about child nutrition management.
- Although some babies looked underweight or underfed, hardly any mother took her children for weighing or height measurement unless suggested by a healthcare provider.
- LHWS and general physicians were instrumental in identifying low-weight or undernourished babies. Parents reported being referred for a more detailed examination of the child.

Older female relatives, including mothers and mothers-in-law, as well as sisters and sisters-in-law, were the most common sources of information regarding complementary feeding and child nutrition issues including health problems of young children. Women in all districts said that their knowledge of appropriate food for the baby was based on information from experienced women in the family and neighbourhood.

Healthcare providers like doctors (mostly general physicians) and LHWs were mentioned by a significant number of mothers, and caregivers. **LHWs were mentioned less than doctors however, as even if they were present in the locality, they focused primarily on immunization and reproductive health, with nutrition for young children accorded lower priority.**

As most women had little or no education, the print media was not a significant source of information for them. Although fathers had higher education level, only two fathers said that they had read material related to child nutrition in the print media some months earlier. This suggests that, at least in low income localities, the print media does not cover child nutrition issues. However, a number of mothers mentioned television, especially morning shows, which sometimes aired information on child nutrition and the kinds of foods that are good for healthy development of young children. While such programmes were only occasionally aired, women found them informative. **A major source of information on the electronic media were Cerelac and formula milk advertisements which provided information on initiation of complementary feeding after the baby turned six**

months as well as soap advertisements which gave messages on handwashing and use of soap.

Radio was the least mentioned source of information. Only one father said that he listened to the radio and had never heard any programme or message on child health or nutrition. Two young mothers in the rural Swat FGD said that educated mothers in their village consulted the internet if they needed to learn about nutrition and or children's health.

In almost all communities, people had access to some form of health services. Basic health units and rural health centres were reasonably accessible in rural communities in addition to local dispensers and compounders who ran private clinics, in the locality or in nearby communities, and were consulted for general ailments like cough or fever, and minor injuries and wounds. However, for serious ailments or treatment people had to travel to the tertiary or district hospitals in urban area, which for many required an effort. Public transport was either not available or was not suitable for a sick person or child as it took time to reach the hospital. Private vehicles could be hired but were expensive and unaffordable for many.

Hardly any mothers took their babies or young children for weighing or height measurement unless suggested by a healthcare provider. It was observed during data collection that many children seemed underweight and weak but parents did not consult a healthcare provider for this purpose, nor did they address the problem in any other way. Rather than consulting healthcare providers, mothers took children with low weight or poor nutrition to religious leaders or women learned in religious prayers for *dum durood*.

Six mothers who were currently breastfeeding and five mothers who were not had been informed by LHWs and doctors that their children were underweight when they had taken them for some other problem. In case of those treated by qualified doctors, babies were provided supplements and Ready to Use Therapeutic Food. The mothers reported that they had been advised by the healthcare providers to give children only homecooked food and make an extra effort to provide nutritious meals to the children.

According to key informants in Abbottabad and Swat (both social activists), parents usually took their children to a medical officer or general physician and rarely consulted a paediatrician, either because they did not know about them, or because they could not afford private doctors. Both key informants were of the opinion that these medical officers and physicians also lacked information about child nutrition or child health problems and often were unable to address the issue.

The local general physicians should be given trainings and courses on child nutrition and CF practices so they can educate their clients as well as address their problems effectively.

– Male social activist's KII, Abbottabad (urban), KP

In case of diarrhoea, again home remedies were used first and if the problem continued then the child was taken to a healthcare provider. Parents and caregivers had adequate knowledge of managing diarrhoea and were aware of administering oral rehydration salts. Many women knew how to prepare home-made ORS were aware of continued breastfeeding during incidents of diarrhoea, feeding soft foods such as *khichri*, *sagu daana* and bananas, and avoiding supplementary milk, wheat (*roti*, *paratha* etc.) and spicy foods.

Decision-making during illness, including taking a sick child for treatment or the type of foods to be given during sickness, were mostly done jointly by family elders and the parents. Knowledge about home-based remedies was mostly transmitted through female elders who were consulted by both parents.

In case of any illness, my mother guides my wife about what to give the baby as she is experienced and knows what will help the baby. – Father's IDI, Peshawar (urban), KP

1.8 Cross-cutting factors: WASH, social protection and food security

Summary findings

- All respondents had high awareness about the importance of hygiene and cleanliness, of utensils, handwashing and clean drinking water. However, practice was lacking in all areas.
- Social protection programmes like BISP were perceived as a support in meeting the dietary needs of children both by beneficiaries and non-beneficiaries.

All respondents had a fairly good understanding of acceptable and desirable WASH practices. However, gaps were identified in the consumption of potable water, handwashing practices and general hygiene and cleanliness practices specific to infants and young children's feeding utensils including milk bottles. Field visits revealed that kitchen areas were usually kept clean but utensils were not necessarily covered or were kept in a separate area, exposing them to flies, dust and other contamination. **None of the mothers and caregivers reported separate eating utensils for infants and young children but claimed to wash all utensils before cooking and serving food using ash or detergent.** It was claimed that milk bottles were also apparently thoroughly cleaned and in a few cases boiled in water before use, but observations in the field showed that **milk bottles remained uncovered and were handled by children and adults alike without much regard for maintaining hygiene.**

Almost all mothers said that their infants and young children drank the same water as rest of the family. Water sources were mostly community taps, hand pumps, tube wells and spring water depending on local availability. In some areas, especially in urban Abbottabad and urban Swat, water was considered quite contaminated as also mentioned by some key informants and service providers. **Mothers and caregivers said that they mostly boiled the baby's water if he was unwell.** Only two mothers said that they only gave boiled water to their babies, and had been advised to do so by their respective doctors;

Handwashing was claimed to be a regular habit by all, especially before eating, cooking, after use of toilet and cleaning including cleaning the baby. However, very few mothers or caregivers mentioned handwashing before handling the baby. Fathers were more forthright about their handwashing practices and some were quite honest in conceding that many times they just forgot to wash their hands before eating or coming in from outside. Use of soap was not very regular. A few caregivers and mothers mentioned that they did not use it every time they washed their hands. Usually they

just used plain water because soap was not always available and they could not afford it as a regular everyday item.

Only a small number of respondents and group participants were BISP beneficiaries. Amongst the 13 who received BISP cash transfers, 12 felt that it provided a cushion for them in terms of economic support especially in buying food rations and those foods for their children which they otherwise could not buy. Beneficiary households said that most of the time they kept **BISP money to fulfil children's education needs and buy food items**. One father whose wife was a BISP recipient said that the amount was too small to have an impact on their children's nutrition needs.

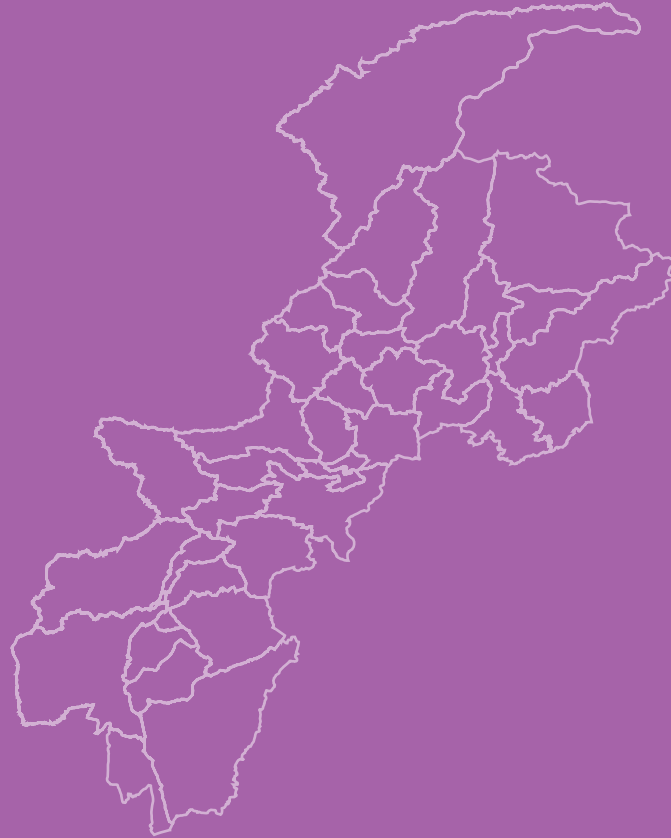
Non-beneficiaries also by and large agreed that such social protection programmes provided support for poor households and beneficiaries had an advantage compared to non-beneficiaries.

Food security was not considered an issue and most people felt that the availability of food items had increased compared to the past. **The main problem was high food prices, which made desirable food items unaffordable for poor and low-income households**. The majority of respondents felt that inflation had reached very high levels and incomes did not match the prices of food items including staple foods such as wheat, cooking oil, rice, potatoes, onions and tomatoes. Fruits and meat were becoming more and more difficult for low-income families to access due to high prices.

A noticeable number of men and women noted the poor quality of food and the use of pesticides and chemicals injected to make items appear fresh. Caregivers were more perturbed about impure foods and compared the good quality of food during their younger days which had showed in the good health of their own infants and young children.







TRIBAL DISTRICTS OF KHYBER PAKHTUNKHWA (KP)

FORMATIVE RESEARCH ON COMPLEMENTARY FEEDING PRACTICES



1 RESEARCH FINDINGS AND DISCUSSION

The tribal districts of KP comprise the region formerly known as FATA.

Data from KP's tribal districts by and large shows similar findings for rural and urban localities, with slight variations in attitudes and practices of mothers towards complementary feeding of children under 24 months of age. Other variables that had been hypothesized as significant in influencing feeding practices were education of parents, household size, age of baby (6–11 months or 12–23 months) and continued breastfeeding.

However, the findings reveal that none of these variables had a conclusive impact on CF practices, with the exception of better economic conditions and one case in which the mother's education (college education) had an impact on feeding practices.

1.1 Socioeconomic characteristics

The study population in both urban and rural localities mostly belonged to low-income households, representing the greater portion of the selected localities. **Most parents were young, below 30 years of age.** The majority of families were joint family structures, with some households having as many as 25 members. Large families were common and the FGD participants had an **average of four children, with some couples having 6–7 children.** According to the service providers consulted during the research, family planning was not

practiced by most people, nor was it approved of. Children were generally perceived as a gift from Allah and to bring their fates with them into the world.

The education level amongst mothers was generally quite low and very few had attended any kind of educational institution. Two (out of the 35 mothers interviewed) had a primary education and one had a master's degree. Fathers had a higher level of education compared to the mothers, but most had only primary or secondary school education. Two fathers out of 15 interviewed had attended college.

The main source of livelihood in rural areas was manual labour. In the sampled households, the majority of families were dependent on daily wages. **Many respondents, both men and women, said that economic opportunities were very limited and unemployment was a major concern.**

Our biggest problem is lack of livelihood opportunities. Most people are dependent on labour work which is not available on a daily basis which means that many times people have to go without food or compromise on their number of meals.

– Male schoolteacher's KII, Khyber Agency (rural), KP tribal districts

Female mobility was extremely restricted and women and young girls were not encouraged to leave the home unless accompanied by a male family member. **Mothers and caregivers mentioned restricted mobility as a barrier to accessing markets and health services for their children and themselves.** Only in rural areas could women go out to nearby shops, mostly those owned by relatives or extended family members. In urban areas there was an even stricter code of conduct for females.

1.2 Gender roles and responsibilities at household level

In Khyber Agency, head of households, men and women had clear roles and responsibilities at the household level and outside. While everyday household chores like washing, cleaning, cooking and caring for the children and family were women's responsibility, earning and providing for the family were a male responsibility. Fathers or male family members were also mostly responsible for managing education needs and health problems because these involved going outside the house for public dealings which was considered culturally inappropriate for women. Compared to other parts of the country, **women and young girls in the tribal districts of KP are much more restricted by local customs, which prohibit them from appearing in public or participating in public dealings.**

We have strict rules for women and don't allow them to go outside the house without informing their husbands first, who then either accompanies her or arranges for some other male family member to go with her. I don't allow my family's women to go out unless there is some special reason. Our culture does not allow it. – Fathers' FGD, Khyber Agency (rural), KP tribal districts

Conversations with fathers reveal that most fathers were unaware of what their children ate and reiterated that wives were responsible for children's dietary requirements. The father's role was perceived as providing food, while cleaning, cooking, serving and feeding was either the mother's responsibility or, if she was unavailable, that of any other female family members (see Table 1).

Children's eating practices, what they eat and how many times are all women's areas.

Men usually have no idea what children eat and what they should eat.

– Fathers' FGD, Khyber Agency (rural), KP tribal districts

Joint family structures were common and therefore other family members also contributed to household expenditures and in caring for children. Grandmothers, aunts and older siblings played an important role as caregivers who assisted the mother in attending to babies and young children by cleaning, bathing, changing clothes and feeding children. A few mothers also explicitly credited their mothers-in-law for keeping the children "safe" while they were busy with other work.

Table 1: Community perceptions of gender roles and responsibilities

FATHERS' ROLES AND RESPONSIBILITIES	MOTHERS' ROLES AND RESPONSIBILITIES
<ul style="list-style-type: none"> • Earning a living and fulfilling the needs of the family. • Buying household groceries and food rations. • Taking unwell family member or children to hospital or doctor's clinic. • Managing the education needs of children. 	<ul style="list-style-type: none"> • Taking responsibility for all domestic chores, like preparing food for the family, taking care of children, cleaning the house, etc. • Taking care of the husband and attending to sick household members and the elderly. • Looking after guests, serving them food and fulfilling other hospitality-related needs. • Tending to livestock.

1.3. Breastfeeding and its relation to complementary feeding

Summary findings

- Lack of awareness regarding exclusive breastfeeding led some mothers to give other liquids like tea and water to the baby during the first six months of life.
- There was a high level of awareness amongst mothers, fathers and caregivers about early initiation of breastfeeding, exclusive breastfeeding and benefits of colostrum for the baby due to awareness sessions conducted by NGOs and aid workers in camps for displaced families during military operations in Khyber Agency.
- Continued breastfeeding was common even after initiation of complementary feeding and supplementary milk, and was an integral part of the infant's diet unless the mother conceived again, after which breastfeeding was immediately stopped.
- Mothers, fathers and caregivers promoted breastfeeding as an essential and important source of the baby's well-being and good health.

Breastfeeding was fairly common in Khyber Agency and **nearly all household members believed in practicing breastfeeding due to its health and nutritional benefits.** Respondents described the importance of breastfeeding in many ways. Some of the most common beliefs were that it fulfils a child's nutritional needs, makes them healthy and strong, minimizes the chances of getting infections (which was noted to be a particular problem with bottle-feeding), gives them energy, keeps them active, helps them grow quickly and ensures that they do not become weak. Almost all respondents believed that there were no comparable substitutes for breastmilk. Another reason mothers preferred to breastfeed was that breastmilk was seen as a free resource that was readily available within the household at all income levels.

The benefits and high prevalence of breastfeeding were reiterated by the key informants and health service providers, all of whom agreed that most women preferred to breastfeed for at least two years unless there was a medical problem or perceived that breastmilk was not enough to meet the needs of the baby. In this case mothers resorted to supplementary milk.

Breastfeeding was initiated early in both urban and rural localities, in most cases immediately after birth. According to the majority of respondents, delay in breastfeeding was now considered a thing of the past. Following their stay in camps for temporarily displaced persons, women were aware of the importance of early initiation of breastfeeding.

Nowadays, women initiate breastfeeding immediately after birth because they are aware of the benefits of early initiation especially the importance of colostrum for the baby's health and wellbeing even in later years of life. – Male schoolteacher's KII, Khyber Agency (rural), KP tribal districts

Mothers also emphasized the role of doctors in early initiation of breastfeeding, and said that now **most women had hospital births where doctors usually instructed the mothers to feed the baby right after birth and not to discard the colostrum.** However, a noticeable number of mothers and caregivers expressed the importance of breastfeeding but at the same time said that they had themselves started breastfeeding two days after delivery as they believed that they did not have proper milk flow in the first few days. Until then, the baby was given "red tea without milk", widely believed to be a detoxification agent.

I initiated breastfeeding two days after my baby was delivered because I did not have enough milk until then. During these two days, we fed the baby red tea and boiled water so she wouldn't stay hungry. – Mother's IDI, Khyber Agency (rural), KP tribal districts

While most mothers and caregivers believed in exclusive breastfeeding for six months, in practice exclusive breastfeeding was not done correctly, as most mothers also fed babies other liquids such as fresh milk, red and green tea, and water in addition to breastmilk. Some did so because they did not realize that these liquids should not be fed or because of issues pertaining to the mother's or child's health. This may be on the doctor's recommendation or as a personal decision. **Lack of knowledge about exclusive breastfeeding duration thus led to early initiation of complementary feeding.**

There was general agreement that a child should be breastfed for two years. But most mothers were unable to breastfeed their children for this period because of short spacing between births. There was a strongly held belief amongst mothers and caregivers that it was improper for a mother to continue breastfeeding during pregnancy. However, women also believed it was

important to continue breastfeeding because of the nutritional benefits of breastmilk. Continued breastfeeding was seen as the religious right of the child.

I know that it is important to continue breastfeeding the baby until it is at least two years old. But I could not breastfeed any of my children for two years because I got pregnant before that. Now I am currently breastfeeding my nine-month-old daughter and hope to continue until she is at least two years.

– Mother's IDI, Khyber Agency (urban), KP tribal districts

1.4. Initiation of solid and semi-solid foods

Summary findings

- In tribal districts of KP, there were mixed views and practices relating to initiation of complementary feeding through solid or semi-solid food.
- Introduction of complementary foods reduced the frequency and amount of breastfeeding.
- Mothers and caregivers decided on the quantity of food at this initial stage based on their assessment of the child's health and hunger.

Mothers and caregivers were aware that complementary feeding should be initiated after the first six months. Most mothers said that they started giving semi-solids after six months of age, with the exception of a few participants in urban localities who started semi-solids before six months if the baby showed signs of hunger, which mothers understood as the crying frequently or not showing the same keenness for milk as before. Most of the interviewed fathers did not have knowledge about the appropriate age for initiating complementary feeding and did not know at what age their own children started complementary feeding.

I am really not sure when my children started eating semi-solids. My wife and mother know about these things, as it is their decision when to start and what to feed the children. In our area, men are not involved in children's feeding behaviour and women of the family take care of such needs. They tell us what to bring and we do it if we can afford it. – Fathers' FGD, Khyber Agency (rural), KP tribal districts

However, although awareness about initiation of complementary feeding was quite high, and mothers reported starting semi-solids at six months and above, mothers and caregivers did not actually track the age of the baby. **Instead, the decision to start giving semi-solids was taken based on cues from the baby and in line with the child's personal needs as assessed by the caregivers.** Therefore, it cannot be conclusively stated that initiation started at six months, but this was generally perceived to be the correct age to start giving semi-solids to a child.

Initiation of semi-solid foods was triggered by certain behaviours as perceived by the mother (see Table 2). Mothers and caregivers expressed similar views about how they assessed the baby's preparedness for complementary feeding. But the child's behaviour was not the only factor that influenced the decision to initiate semi-solids. Mothers and caregivers said that doctors and NGO workers had also informed them that a baby should be started on semi-solids at six months of age because it was important for healthy growth and development of the child.

We were told during our stay in the camps that the right age for starting soft foods was six months because by then mother's milk or only liquids were not enough for the baby's growth. Besides, in most cases mother's milk is not enough for the baby after a certain age and it starts to show signs of hunger at around 5–6 months by crying or attempting to snatch roti from others' hands. Then we know that the baby is ready for food now. – Mothers' FGD, Khyber Agency (rural), KP tribal districts

Table 2: Triggers for initiation of complementary feeding

MOTHERS' PERCEPTIONS OF TRIGGERS FOR INITIATION OF COMPLEMENTARY FEEDING IN TRIBAL DISTRICTS OF KP
<ul style="list-style-type: none"> • Mother's milk is not sufficient and caregivers start giving diluted soft foods to meet the baby's hunger needs. • Baby starts crying more often and shows dissatisfaction even after milk. • Baby shows interest in other foods and tries to snatch food from others' hands. • Baby can turn onto her back without help and tries to sit up. • Was told by a healthcare provider or NGO worker to start semi-solids once the baby is six months old.

Interviewed mothers believed that soft foods should be given to the child initially as they were easily digestible, and a variety of foods should be given to develop the child's palate and interest. Mothers believed that it was important to initiate semi-solid foods because the additional nutrition in the food would support the child's growth and provide additional energy to support a higher level of activity.

Various semi-solid foods were popular for initiation of complementary feeding. **In both communities, suji and eggs were common first foods for babies, followed by Cerelac and biscuits.** A significant part of all babies' diets, regardless of age, was red or green tea, which was considered to have multiple benefits such as a cleansing agent, thirst-quencher and stomach-filler. The first foods chosen were nutritionally dense, easy to digest, and kept the child satiated, healthy and strong. Financial considerations were also important in deciding initial foods, as these were often prepared separately from the rest of the family's meals.

My baby has just turned six months. Only a week back I have started to give him a half-boiled egg, which I give him twice a day. Gradually I will increase the amount when he is able to digest more. My mother-in-law advised me to give him an egg as a first food as it is nutritious and easy for the baby to digest if it is soft. It is also convenient for us because we have hens at home so eggs are available in the house all the time. – Mother's IDI, Khyber Agency (urban), KP tribal districts

In terms of the first foods introduced, in most homes separate foods were prepared especially in case of early initiation of complementary foods, as the baby was considered too young to digest regular food. However, the separately-prepared food was either Cerelac or other forms of quick foods, or was prepared, stored and repeated for multiple meals. **Food charts from mothers' in-depth interviews reveal that separately-prepared foods were repeated three or four times over two days.**

Although mothers were usually the main decision-makers in regards to initiation of complementary feeding, mothers-in-law also played a significant role in influencing the mothers' decisions. Joint families are common in Khyber Agency, and at the household level the mother-in-law plays a key role in decision-making. There was a consensus amongst all respondents that mothers-in-law, and in some cases mothers, not only provided caregiving support in form of feeding, cleaning, playing, and monitoring the child while mothers were busy with other household work, they were also a source of information for the parents.

Women generally know when and what to feed babies. We mostly live in joint families where there are other experienced women as well who advise the mother. After all my mother has brought up seven children so she knows what is right and what is wrong.

– Fathers' FGD, Khyber Agency (rural), KP tribal districts

First foods were based on the family's financial situation. Babies were mostly given whatever was available in the house such as *suji*, eggs or Cerelac. Many mentioned Cerelac as a desirable first food because it had the right consistency and fulfilled the nutritional needs of the child. However, mothers could not afford to give it regularly due to its cost.

During the initial phase of complementary feeding, mothers reported that they fed their child 3–4 times a day, usually on demand. Often children were fed small amounts during each meal. Mothers relied on non-verbal cues when deciding the quantity of food to feed the child. Mothers mentioned that they fed their child until the point that he or she start spitting out the food, which was a sign that the child was satiated. Most mothers did not try to feed their child more food after it was rejected. Satiation was also judged by mood and level of activity after food. Most mothers knew their child's preferences and gave foods she or he preferred to eat.

When I started giving semi-solids to my baby, I use to give her food three to four times, whenever I felt that the baby was hungry because she would cry more or become agitated. I gave her a small amount and gradually increased the quantity with time as she would continue to eat, from which I understood that she wanted more. – Mother's IDI, Khyber Agency (urban), KP tribal districts

1.5 Complementary feeding practices

1.5.1 Minimum dietary diversity

Summary findings

- Mothers usually gave children whatever was easily available in the house, preparing items that were easily digestible and satisfied the hunger of the baby.
- Lack of financial resources was a barrier to dietary diversity. Under these circumstances mothers chose to feed children filling foods like grains, suji and tubers, and low-cost shelf foods such as biscuits and crisps.
- People had better access to a variety of foods in their local markets, but lack of mobility restricted women from accessing markets.
- Dietary diversity was lacking in most communities and although mothers and caregivers were aware of what constituted an adequate diet for children, accessibility and affordability limited their options.
- Children were mostly fed from 2–3 out of the seven main food groups.
- Meal frequency and quantity was based on the child's demand.
- Most children aged 6–23 months were fed the same food as the rest of the family not just because of financial limitations but also poor caring practices.

Mothers and caregivers in tribal districts of KP had a higher understanding of dietary diversity and its relevance and importance for a baby's proper growth after receiving information whilst living in camps for displaced families. **However, most mothers gave their children 2–3 main food groups out of seven, mainly grains and dairy (primarily milk). Sugar-based foods were common and preferred over other foods.** *Suji* or wheat halwa and rice *kheer* were mentioned by several mothers and caregivers as foods prepared especially for babies, otherwise they were fed the same foods as the rest of the family. Service providers and key informants also said that **due to poverty most people were unable to provide fruits and meat products** to their children as the prices were beyond their purchasing power.

Poverty is our biggest challenge in providing adequate food to our children. We try to give them food which satiates their hunger and which is available in the house. Common foods for babies are potatoes, roti, suji and other food cooked at home. Most parents can't buy the fancy foods available in the market because we are lucky even to have three square meals a day for the entire family; how can we afford fruits and Cerelac for the young ones? – Mothers' FGD, Khyber Agency (rural), KP tribal districts

Parents provide enough food to fill the child's stomach but the diet given to children here totally lacks diversity. Small children's diet is limited to whatever is available at home, which is simply not enough to meet the nutritional needs of growing children. –LHWs' FGD, Khyber Agency, KP tribal districts

Mother's milk remained an essential and integral part of the baby's diet and although it did not necessarily play a significant role in fulfilling the baby's nutritional needs breastfeed continued to be practiced 5–6 times a day between meals. In case of children who were not currently being breastfed, many were not given supplementary milk (formula or fresh) due to financial constraints.

One of the interviewed mothers said that she was no longer breastfeeding her son and now his diet had no regular milk in it because they could not afford it.

It is already difficult enough to provide food to the family because my husband is a labourer and sometimes he does not get any work. Then we cut down on our number of meals although we do our best to provide proper food to the children but we have to compromise on quality. I can't buy milk for my son everyday so I just give him home meals, water and tea.
– Mother's IDI, Khyber Agency (rural), KP tribal districts

Meat products were only cooked occasionally, usually once or twice a month, and small portions were shared by the entire household. Similarly, fruits were not a regular part of young children's diet because of high prices. Mothers and caregivers said that they mostly gave seasonal fruits which were more affordable, like bananas, guavas and apples, and these also were not regularly provided.

Fruits are very expensive so we can't buy them on a regular basis. Sometimes, when I can afford to then I buy fruits for my children because they really like them. But that happens only once or twice a month.
– Fathers' IDI, Khyber Agency (rural), KP tribal districts

Mothers and fathers said that no special budget was kept aside for young children's food or other needs because most household expenses were dependent on daily wages except for monthly or weekly rationing of certain foods like wheat, sugar and tea.

We don't keep aside any amount for children's food. Just sometimes bring them special items like cakes, chips or biscuits, otherwise we only buy regular grocery items which are needed in the house.
– Fathers' FGD, Khyber Agency (rural), KP tribal districts

Eggs were another food category mentioned by many as an adequate complementary food for babies. But several parents lamented the high cost of eggs with many reporting Rs 20 for a single egg in the winter, which was considered the appropriate season for eating eggs. In households where people kept their own hens, eggs were given regularly to young children as they were considered nutritious and full of energy especially during winter. Some respondents said that cost of food items was higher in Khyber compared to Peshawar, the capital of KP province.

Few food items were considered appropriate for children; rice and bananas were avoided by some mothers and caregivers during certain seasons or were perceived to be inadequate in some conditions. For example, **eggs were not given in summers by some mothers, bananas and rice were not given often because mothers felt that they caused respiratory problems in cold weather.**

Parents faced challenges in providing food to their children because of poverty, which not only prevented them from buying desired food items but also affected their capacity to fulfil other needs necessary for providing food to the children. **Mothers and caregivers in FGDs said that sometimes they did not have enough wood to cook and the family had to go to sleep hungry.**

There are days when there is no money to buy wood for cooking and so no food is cooked. We adults manage somehow or the other, but children get really distressed. Although we try to manage by getting help from a neighbour or relative but it is still not easy.
– Mothers' FGD, Khyber Agency (rural), KP tribal districts

No gender discrimination was noted in terms of CF practices across respondents. **Most mothers and fathers said that they did not differentiate in terms of feeding practices based on gender,** believing that boys and girls are the same in all aspects and should be treated equally.

1.5.2 Minimum meal frequency

Most mothers and caregivers decided meal frequency for younger babies on the basis of the child's demand, while with older children (12 months and above) meal frequency was based on the family's routine. Most mothers fed children when they demanded food by showing signs of hunger. Mothers who practiced demand-based feeding relied on cues like crying, trying to grab food or following the mother around and demanding food (verbally or non-verbally). A smaller proportion of interviewed mothers fed their child based on experience: when they expected the child to get hungry.

However, it again needs to be kept in mind that most children were fed more or less the same food as the rest of the family and were therefore usually fed at family meals, usually thrice a day. According to mothers and caregivers, children usually ate what was given to them and if they did not like any specific foods, they were given milk or a snack, which were also provided if they were hungry outside mealtimes.

Smaller children are given food 4–5 times a day or whenever the mother feels that the baby is hungry.

Older babies usually manage themselves by eating whatever they are given. They mostly prefer chips, biscuits and sweets and don't like regular meals. – Mothers' FGD, Khyber Agency (rural), KP tribal districts

When deciding how much to feed the child, most mothers practiced demand-based feeding and reported that they did not want to force their child to eat more than she or he wanted. **Mothers relied on non-verbal cues related to the child's mood and level of interest in food to decide when to stop feeding young children.** Mood-related cues included: the child stops crying, the child becomes happy and starts smiling, laughing or playing. Cues related to the child's interest included: spitting out food, rejecting more food, and turning away from the food.

1.5.3 Minimum acceptable diet

Most mothers showed awareness that a balanced diet contained dietary diversity, such that it would contain several different types of food, while fathers were less aware of a balanced diet. The foods mentioned by mothers in a balanced diet were mostly eggs, different forms of meat, fruits, vegetables, and grains. Only two mothers out of 31 who participated in the FGDs and IDIs mentioned nuts and legumes.

Mothers and caregivers alike said that they had knowledge about adequate diet for young children from NGO workers in the camps, but no resources to provide their children the required diet.

We know what kinds of food our children need. We were told these things when we were in the camps.

They use to distribute free rations and also organized sessions on what kind of foods children and women of different ages need. But what is the use of all this information when we don't have the food items to prepare those foods. Government should give us free or subsidized rations to support poor people in our communities as the aid agencies were doing in the camps. – Mothers' FGDs, Khyber Agency (urban), KP tribal districts

Several mothers mentioned Cerelac as a food item that should be part of a child's balanced diet. Mothers generally believed that Cerelac was a great meal for the baby and doctors often corroborated this and encourage its use.

Additionally, mothers were **usually aware of their child's preferences and preferred to feed them foods that they enjoyed eating.** The most likely reason for this is convenience to ensure a smooth feeding session. Mothers and caregivers agreed that feeding a young baby or child required patience could take 15–30 minutes, which many mothers simply did not have. According to some caregivers who regularly fed their grandchildren, they combined play and entertainment to engage the baby while feeding, otherwise the baby would lose interest and wander off.

A factor in the choice of food was the mother's perception and experience regarding ease of digestion. Mothers often believed that young children could not digest certain types of foods because these were too complex for their stomachs to break down or because they led to stomach-related problems such as diarrhoea. **Specifically, mothers believed that a young child could not easily digest meat products, nuts and vegetables.** The evidence utilized by mothers to support these claims is unclear, though may be expected this to be based on experience and family or community beliefs. In any case, this proved to be **a barrier to feeding a variety of food groups to young children.**

Interpersonal communication played a significant role in transmitting information amongst community women. Many mothers and caregivers said that most local doctors and LHWs did not give any advice or information on children's nutrition or feeding practices. In fact, women generally expressed reservations about LHWs and said that they visited their homes once a month and just distributed general medicines and left. Their main sources of medical information were doctors in Peshawar who were consulted if a child was very unwell. All respondents in the research showed satisfaction with healthcare in Peshawar and said that doctors there provided satisfactory treatment and gave thorough instructions and information about childcare and dietary needs.

Lack of economic resources, and in turn affordability, emerged from this research as the main barriers to incorporating adequate quantity and diversity in children's diets. Affordability significantly influenced dietary diversity as parents fed their children the limited range of foods that they could afford to buy. It was mentioned that milk, eggs, meat products, fruits and vegetables were difficult to afford, while grains, roots and tubers, and shelf foods, were more affordable. For this reason, parents relied on these foods as staple diets.

Additionally, we found that **mothers preferred to provide food that could affordably fill the child's stomach and keep them satiated for longer.** *Roti*, potatoes, biscuits and suji were reported as foods that kept children satiated for longer. This reinforced the reliance on grains, roots and tubers, and shelf foods. One mothers explained:

I try to cook economical items like potatoes which can be consumed by the whole family as well as the baby. – Mothers' FGD, Khyber Agency (rural), KP tribal districts

Access to food was not a major problem but **women's mobility to access food from the market was a barrier, especially in urban communities.** In rural communities, women could go to nearby shops if need be although it was not encouraged, but in urban communities women's mobility was heavily restricted and women could not go out without being accompanied by a male, and that

only in case of dire need. This meant that in most families, mothers could not access the market themselves to get food for their child and relied solely on the father or other men of the household.

Most parents did not plan their young children's dietary requirements or budget for them separately. The main reason attributed by respondents was lack of financial resources, which were insufficient to maintain specific meal plans for babies and young children.

1.6 Decision-makers

Summary findings

- Mothers and grandmothers were key decision-makers regarding complementary feeding.
- Fathers had a limited role in feeding decisions but were in charge of financial decisions.
- Health service providers played a significant role in influencing mothers' and caregivers' decisions regarding young children's diet and food intake.

Mothers, and the child's grandmothers, often took decisions regarding continued complementary feeding. Mothers were the primary decision-makers, however, in many cases the decision lay with the child's grandmother. Fathers were found to be less involved as decision-makers regarding complementary feeding.

1.7 Influencers and information sources

Summary findings

- With greater access to trained healthcare providers parents could obtain information about complementary feeding more readily.
- Healthcare providers accessed by parents lacked adequate information on child nutrition and recommended CF practices.
- Local healthcare providers were found to be advising the use of branded products.
- Most communities lacked electricity and therefore people did not have access to electronic media.
- Female elders remained primary sources of information for both mothers and fathers, and transferred traditional information that was sometimes based on misconceptions.
- Reliance on community sources was significant in both rural and urban areas. Interpersonal communication and transfer of information amongst community women was a significant source of knowledge for many mothers and caregivers.

Most mothers were dependent on female relatives, especially their mothers-in-law (the child's paternal grandmother), for guidance and advice on feeding practices. Mothers also took their own decisions but these stemmed from experience or information passed on from friends and neighbours. The transfer of information amongst local women was mentioned as a significant source in influencing mothers' decisions regarding their children's feeding practices.

At the household level, the child's father, grandmother and at times grandfather also influenced decision-makers. The opinions of family elders was often trusted because of their experience.

Many service providers also considered the education level of mothers and fathers as an important determinant influencing CF practices. Service providers felt that while mothers' education was of course very important, fathers' education also played a vital role in changing and influencing mothers' approaches to complementary feeding.

Most interviewed households had access to some form of health service in their own community that ranged from a government or private hospital to a local private clinic or dispensary. However, like other regions in the country, home remedies were tried, especially for diarrhoea management and only if the problem persisted was the child taken to a healthcare provider. Almost all mothers and caregivers were familiar with home-based remedies and the need for higher intake of liquids in cases of diarrhoea.

Some mothers did seek to consult a healthcare provider specifically for nutritional advice if their child had become weak, while others consulted them about nutritional issues when they visited for other health-related issues.

Some healthcare providers were found to be promoting the use of Cerelac and other packaged foods, which increased mothers' likelihood of using these products.

1.8 Cross-cutting factors: WASH

The linkage between WASH and complementary feeding was recognized by almost everyone.

Mothers, fathers and caregivers alike emphasized the importance of clean utensils, handwashing and clean drinking water. Practices for washing and preparing a young child's feeding utensils were similar to those followed for the rest of the household. Some mothers reported that they maintained cleanliness before preparing the child's food and feeding the child.

However, use of soap for handwashing was not mentioned specifically, possibly indicating the use of plain water for handwashing. This is critical behaviour for the baby's wellbeing, especially considering that multiple family members, including older siblings, are involved in caring for children. Due to prevalent water scarcity and dependence on communal wells especially in rural areas, water had to be stored for domestic usage. This probably influenced handwashing practices due to issues with accessibility and convenience of use.

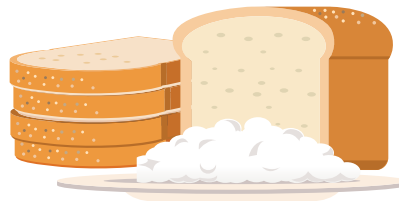
Children mostly drank the same water as the rest of the household, which was generally reported to be unclean by many parents and service providers alike. However, none of the respondents stated they boiled the water or addressed this concern in any way.





PUNJAB

FORMATIVE RESEARCH ON COMPLEMENTARY FEEDING PRACTICES



1 RESEARCH FINDINGS AND DISCUSSION

As at the national level, provincial data from Punjab reveal only slight variations between various strata of the population, which can be attributed to the fact that the study population had similar socioeconomic characteristics. Differences by district and locality are noted where observed.

1.1 Socioeconomic characteristics

The study population in both urban and rural communities mostly belonged to low-income households, reflecting the wider population in the selected localities. The education level amongst mothers was generally low, though relatively higher than in Sindh, KP and Balochistan, with a substantial number having higher secondary schooling.

The main sources of livelihoods in rural localities were manual labour, farming and running small businesses like village shops, vendors and maintenance shops. Female employment was not common, but women who were employed were involved in seasonal agricultural labour, teaching or healthcare. Female mobility was not as limited as in some other regions of the country, and in most communities women could freely go out of the home. However, when going out of the community, women mostly went in groups or were accompanied by their male family members.

In urban localities, residents mostly lived in congested areas, inhabiting small houses with two or three rooms. Rural residents had more space but less developed structures, with houses constructed of baked and unbaked bricks as well as clay, tin and cement.

1.2 Gender roles and responsibilities at household level

Men and women had clear roles and responsibilities at the household level and outside (see Table 1). While everyday household chores were women's responsibility, earning and providing for the family was a male responsibility. Feeding young children was also considered the main responsibility of the mother and the fathers were expected to provide the food items. Many fathers said that they helped in feeding the baby occasionally but not regularly or frequently.

Sometimes when I play with my children, I also feed them but on a daily basis mostly my wife feeds them because I go in the morning and return in the evening and she is the one who stays home. – Father's IDI, Bahawalpur (urban), Punjab

Joint family structures were common in rural areas, therefore, other family members also contributed to household expenditures and helped attend to children. Grandmothers, aunts and older siblings played an important role as caregivers who assisted the mother in attending to babies and young children by cleaning, bathing, changing clothes and feeding them.

Of course, older siblings also play a role in deciding the baby's CF practices. When I am not free then my older daughter also feeds the baby. Although, I usually tell her what to give to the baby, but naturally how much she is feeding him depends on her. Sometimes, she also takes him out to the corner shop and buys him chips and biscuits. – Mother's IDI, Lahore (urban), Punjab

Table 1: Community perceptions of gender roles and responsibilities

FATHERS' ROLES AND RESPONSIBILITIES	MOTHERS' ROLES AND RESPONSIBILITIES
<ul style="list-style-type: none"> • Earning a living and fulfilling the needs of the family. • Buying household groceries and food rations. • Taking unwell family member or children to hospital or doctor's clinic. • Managing education needs of children. • Maintenance and repair around the house (mostly rural communities). 	<ul style="list-style-type: none"> • Taking responsibility for all domestic chores, like preparing food for the family, taking care of children, cleaning the house, etc. • Tending livestock caring and performing farm labour (rural communities). • Attending to children's schooling and everyday education needs. • Collecting water and wood for fuel. • Maintaining the house, e.g. re-plastering with clay (rural communities). • Taking care of the husband, attending to sick household members and the elderly. • Looking after guests, serving them food and fulfilling other hospitality-related needs.

1.3 Breastfeeding and its relation to complementary feeding

Summary findings

- Most mothers gave a pre-lacteal feed such as rosewater and honey before initiating breastfeeding.
- Mothers were unaware of what constitutes exclusive breastfeeding and sometimes fed children fresh milk, tea and other liquids in the first six months.
- Initiation of breastfeeding initiation was often delayed due to misconceptions regarding colostrum and its effect on the baby.
- There was little consensus on the number of years a child should be breastfed, ranging between 1.5–5 years.
- Continued breastfeeding was common even after initiation of complementary feeding and supplementary milk.
- Mothers, fathers and caregivers promoted breastfeeding as an essential and important source of baby's wellbeing and good health.
- Most mothers thought they should not breastfeed children when they were pregnant.

Breastfeeding was fairly common in Punjab and **nearly all household members believed in practicing breastfeeding due to its health and nutritional benefits**. Respondents described the importance of breastfeeding in many ways, with some of the most common beliefs being that that it fulfils children's nutritional needs, makes them healthy and strong, minimizes the chances of getting infections (noted to be a particular problem when bottle-feeding), gives them energy and keeps them active, helps them grow quickly and ensures that children do not become weak. Mothers believed that there were no comparable alternates to breastmilk. One of the main reasons mothers preferred to breastfeed was that it was seen as a free resource that was readily available in households at all income levels.

Most interviewed mothers gave their child pre-lacteal feed before initiating any form of breastfeeding. Common pre-lacteal feeds in Punjab were rosewater and honey. Female elders and doctors were believed by mothers to be best informed about breastfeeding and at times they influenced delay in initiation of breastfeeding.

In our area, breastfeeding usually starts two days after delivery of baby, because colostrum is harmful for the baby and upsets their stomach. – Mothers' FGD, Sargodha (rural), Punjab

Many mothers who believed in feeding their child colostrum within an hour of birth were not able to do so if they had delivered through a caesarean.

While some mothers believed in exclusive breastfeeding for six months, others exclusively breastfed for a shorter duration and initiated complementary feeding earlier than recommended. Several mothers mentioned that they exclusively breastfed for 3–5 months and then initiated semi-solid foods. Similar findings emerge from mothers' FGDs where many mentioned that a baby should be exclusively breastfed for at least six months, but in practice, they

also gave supplementary foods like fresh milk, tea and other liquids. This could be on the doctor's recommendation or personal decisions. Thus, lack of knowledge about exclusive breastfeeding duration and meaning led to early initiation of complementary feeding.

There was little consensus on the number of years a child should be breastfed. The most commonly-held beliefs were one-and-a-half year to two years. There was also a common belief that boys should be breastfed for two years and girls for two-and-a-half years. Mothers believed it was important to continue breastfeeding because of the nutritional benefits of breastmilk and because continued breastfeeding was considered a religious right of the child.

We know from our elders the benefits of breastfeeding. It is a common belief that mother's milk is effective for 40 years of a person's life. – Father's IDI, Gujranwala (urban), Punjab

There was a common misconception amongst women in Punjab, as in the rest of the country, that they should not breastfeed their child if they become pregnant. This has proven to be a major barrier to continuing breastfeeding for two years and influences the amount of nutrition a young child receives.

1.4 Initiation of solid and semi-solid foods

Summary findings

- In Punjab, complementary feeding was introduced as early as three months and as late as seven months.
- Introduction of complementary foods reduced the frequency and amount of breastfeeding.
- When deciding on the quantity of food in this initial stage, mothers and caregivers assessed the child's health and hunger to make the decision.
- The first foods selected were nutritionally dense, easy to digest, and kept the child satiated, healthy and strong.

There was a wide range of beliefs in terms of the appropriate age at which to initiate complementary feeding. Most mothers were aware that complementary feeding should be initiated after the first six months; however, many interviewed mothers believed in starting earlier or later than the WHO-recommended age. Among the interviewed mothers, the latest age for initiation of complementary feeding was seven months, while the earliest was 40 days – at this age the interviewed mother said that she ideally started feeding the child highly-diluted soft foods. Similar views were expressed by fathers and caregivers who gave varying ages for initiation of complementary feeding, although by and large most said after six months.

Starting complementary feeding at six to seven months is too late because the baby needs to build its appetite at an earlier age. – Caregiver's IDI, Dera Ghazi Khan (urban), Punjab

In terms of practice, **most interviewed mothers reported that they initiated complementary feeding in line with their views on the matter.** Most FGD participants and interviewees amongst caregivers and mothers said they initiated complementary feeding at six months.

A range of triggers was found to lead to either early or late introduction to semi-solid foods (see Table 2).

Table 2: Triggers for initiation of complementary feeding

EARLY INITIATION (BEFORE 6 MONTHS)	LATE INITIATION (AFTER 8 MONTHS)
<ul style="list-style-type: none"> • Insufficient breastmilk which triggered the mother and caregivers to start diluted supplementary foods like Cerelac. • Lack of knowledge about appropriate age of baby for initiating complementary feeding. Many caregivers believed that the right age for semi-solids was four months and transmitted this to their daughters and daughters-in-law. • The range of choices available in the market tempted mothers and fathers to introduce new foods perceiving them to be beneficial for the baby. • Poor caring practices led parents and caregivers to introduce semi-solids early, as a result of which the baby stayed full and demanded less attention. • Parents and caregivers found it cost-effective to introduce the baby to semi-solids if the mother was unable to breastfeed as both parents said that formula milk was quite expensive and difficult to afford. 	<ul style="list-style-type: none"> • Continued breastfeeding was amongst the most common reasons for late initiation of semi-solid foods. • Lack of resources was a barrier to providing an adequate diet to children. Mothers said that they continued to breastfeed because they were unable to provide an age-specific diet and introduced children to semi-solids only when they could eat the same food as the rest of the family. • Lack of knowledge about the correct age for initiation of complementary food and its importance for the baby's growth. • Poor caring practices of parents and caregivers resulting in lack of understanding about the child and its nutritional needs. Several mothers said that they did not have time to properly feed the baby because there were too many other household chores.

Interviewed mothers believed that soft foods are initially given to the child so that they can easily digest it, and a variety of foods should be given to develop the child's palate. Mothers believed that it was important to initiate semi-solid foods because the additional nutrition would support the child's growth and provide additional energy for a higher level of activity.

Unlike other parts of the country, we found that most **mothers in Punjab reported that they reduced the frequency of breastfeeding once they initiated complementary feeding**, some mothers mentioned that they did so by choice, while others said that milk production fell naturally once their child started eating other foods.

Across Punjab, various semi-solid foods were popular for the initiation of complementary feeding. **The most commonly mentioned foods were Cerelac, custard, mashed banana, boiled eggs, porridge, rice, khichri, biscuits dipped in tea or milk, cake, vermicelli, roti, choori and yogurt. The choice was made on the basis of foods being nutritionally dense, easy to digest, and keeping the child satiated, healthy and strong.** Financial considerations were also important in deciding the initial foods, because these were often prepared separately from the rest of the family.

The first food I gave my child was Cerelac, this was based on the recommendation of the doctor who told me that this would be good for the baby because it is soft, full of nutrition and easy to digest. The doctor told me to start feeding him at six months. – Mother's IDI, Rawalpindi (rural), Punjab

Separate foods were prepared in most homes especially in case of early initiation of complementary foods, as the baby was considered too young to digest regular food. However, these separately-prepared foods were either Cerelac or other forms of quick foods, or were prepared, stored and repeated for multiple meals. The food charts developed from mothers' IDIs reveal that separately-prepared foods were repeated three or four times over two days.

The key decision-maker with regards to initiation of complementary foods was almost always the mother. However, various household and community members influenced the decision. It was common to get recommendations from healthcare providers such as doctors or LHWs. However, doctors often recommended Cerelac, which was found to be expensive and difficult to provide regularly. Fathers, aunts, grandmothers and other family members also influenced which foods were first fed to a child. Even food packaging was used as a source of information on exclusive breastfeeding and initiation of complementary feeding.

In the seventh month we start feeding the child, in the first six months we only give the child breastmilk, this is based on what the doctor told us. We also know this because we read this on the Cerelac packaging. – Mother's IDI, Bahawalpur (urban), Punjab

During the initial phase of complementary feeding, mothers reported that they fed their child between one and three times each day, often feeding the child when the mother was eating herself. Children were fed small amounts in each meal. Mothers relied on non-verbal cues when deciding the quantity of food to feed the child. The child's satiation was judged by the reaction to the food, mood and level of activity after food. Most mothers also knew their child's preferences and fed their child foods they preferred to eat.

In the beginning [of initiating complementary feeding] I used to feed him once a day. I would feed him one or two spoons, after that he would spit it out, which is how I would estimate that he is full. – Mother's IDI, Lahore (urban), Punjab

1.5 Complementary feeding practices

Summary findings

- Mothers selected food items on the basis of nutritional value and helping the child learn, as well as his or her preferences and perceived ease of digestion.
- Lack of financial resources was a barrier to dietary diversity in Punjab and mothers chose to feed children filling foods like grains, roots and tubers, and shelf foods.
- People had better access to a variety of foods in their local markets, but some women's lack of mobility restricted them from accessing markets.
- Monthly budgeting and local financial networks enabled people to provide adequate quantity and variety of food for their children.
- Parents generally considered costlier packed foods to be more nutritious and felt deprived because of their inability to provide these to their children.
- Dietary diversity was lacking in most communities and also misunderstood by most parents and caregivers.
- Children were mostly fed 3–4 out of the seven main food groups.
- Meal frequency and quantity was based on demand of the child.
- Most children aged 6–23 months were fed the same food as the rest of the family because of financial limitations and poor caring practices.

1.5.1 Minimum dietary diversity

As in other regions of the country, in Punjab, understanding of food diversity was misconstrued by most of the target populations. Rather than considering dietary diversity according to food groups, mothers and caregivers perceived it in terms of taste, distinguishing between sweet and salty foods, and gave the same food groups in slightly different forms. The food charts show that most mothers gave 2–3 main food groups out of seven, with the main focus on grains and dairy (primarily milk).

I fed her milk and rusk in the morning in addition to breastmilk. Then in the afternoon I gave her some kheer and cow milk, and breastmilk in between. As a snack I gave her biscuits and some milk tea. At dinner she had roti softened in milk. – Mother's IDI, Sahiwal (urban), Punjab

Furthermore, the food charts indicate that **mother's milk remained an integral part of the child's diet**. Although it might not necessarily play a significant role in fulfilling a baby's nutritional needs, breastfeeding continued to be practiced 5–6 times a day between meals.

In the FGDs with fathers, only two participants, in rural Gujranwala and Sargodha respectively, mentioned the importance of food diversity for a baby's health without prompting by the moderator. Others agreed once prompted and also gave a list of foods which they considered important for healthy growth, primarily all forms of milk (breastmilk, fresh milk and formula milk), fruits, eggs, meat, and grains. Amongst many respondents, **understanding of diversity and balanced diet**

was unclear and based on misconceptions. Misconceptions about junk foods persisted; parents generally considered costlier packed foods more nutritious, and felt deprived at their inability to provide these to their children.

To fulfil my children's nutrition needs, I bring them chocolates, biscuits and fruits as these make them strong. – Father's IDI, Faisalabad (rural), Punjab

Generally, parents and caregivers were aware that diverse foods were important for a young child's dietary requirements. In practice, economic limitations hindered their ability to provide these foods. According to most mothers and caregivers, foods such as fruits, eggs and meat were beyond their reach because of the high cost. These foods were cooked and consumed only occasionally. Even more affordable seasonal fruits, like bananas, guavas and apples, were not fed to children on a regular basis.

We try to give our children fruits like bananas and apples especially during the season as they are easily available and affordable. But we can't buy them on a regular basis because we can't afford to. Besides, there are other children in the family who naturally also want to eat fruit so providing for everyone is beyond our economic means. – Mothers' FGD, Dera Ghazi Khan (rural), Punjab

Most mothers and fathers said that they did not differentiate feeding practices based on gender. This was because parents believed that boys and girls were the same in all aspects and should be treated equally. Their opinion was bolstered by guidance from elders, doctors and LHWs.

What kind of a question is this? How can we differentiate between children based on their gender? Both are our blood and are same for us. We give better food to our daughters as they will get married and bear children for which they need to be strong. Girls go to other families where we don't know what kind of conditions they will have to live in so we try our best to give our best to them while they are with us. – Caregivers' FGD, Multan (rural), Punjab

A few mothers mentioned that boys and girls should be fed differently, but this was mostly based on their perception of what they could digest. For instance, one mother thought that girls could eat "cooling" foods with *thandi taseer*, while boys may not be able to digest it. In a number of communities' mothers and caregivers said that they gave better food to girls compared to boys because girls were more fragile and had to be strong in order to be future mothers.

An important factor concerning the lack of diversity in food was that children were given the same foods as the rest of the family except that their food was softened in milk or curries to make it easier to chew and digest, or selected from family foods keeping in view the texture and level of spice.

We mostly give the baby same food which the rest of the family eats. Generally there is something different cooked in the house everyday so the baby also gets the same variety. – Caregiver's IDI, Lahore (urban), Punjab

1.5.2 Minimum meal frequency

When deciding the frequency with which to feed the child, most mothers and caregivers decided on the basis of the child's demand while a few decided on the basis of the family's routine. Most mothers were found feeding children when they demanded food by showing signs of hunger. Mothers who practiced demand-based feeding relied on cues like crying, reaching for food or following the mother around. A smaller proportion of interviewed mothers fed their child on the basis of experience of when they expect the child to get hungry. Even fewer fed young children at the same time as the rest of the family and/or elder siblings.

Older children were usually fed at the same time as the other family members. According to mothers and caregivers, children usually ate what was given to them. Milk and snacks were given when the child rejected the meal or when the child got hungry outside mealtimes.

We mostly give the same food to the baby as we eat ourselves when the baby is around 8–9 months old. In between meals, if she is hungry, we give her biscuits or milk or whatever is there in the house. – Mothers' FGD, Multan (rural), Punjab

When deciding how much to feed the child in one meal most mothers practiced demand-based feeding and reported that they did not want to force their child to eat more than they wanted. **Mothers relied on non-verbal cues related to the child's mood and level of interest in food to decide when to stop feeding their young children.** Cues related to mood included stopping crying, becoming happy and starting smiling, laughing or playing. Cues related to interest included spitting out food, rejecting more food and turning away from food.

I rely on her demand to decide how much to feed her. When she stops eating and starts spitting out her food, at that point I know that she is not interested in eating more and I stop feeding her. Other times she falls asleep very easily, so I know that she is not hungry. – Mother's IDI, Multan (urban), Punjab

I used to feed her based on my own estimate of the best time to feed her, but in this case she was not ready for food and would start vomiting. So now I don't rely on my estimate anymore. I wait for her to demand food before feeding her. I know she is demanding food when she starts crying. – Mother's IDI, Sahiwal (urban), Punjab

Most mothers reported feeding the child in small quantities because they believed that their child's stomach was small or because the doctor had advised them to do so.

1.5.3 Minimum acceptable diet

When asked about a balanced diet, most mothers showed awareness that a balanced diet contained dietary diversity, with several different types of food, while fathers were less aware of a balanced diet. The foods mentioned by mothers as part of a balanced diet included eggs, different forms of meat, fruits, vegetables, and grains. Fewer respondents mentioned nuts and legumes. Most parents considered nuts to be unsuitable for young children due to difficulty in swallowing and digesting, and placed them in the category of foods with *garam taseer* or foods that generate heat in the body. Such foods were especially avoided by young and old people during summer months.

While mothers were not aware of food groups per se, and did not know about specific nutritional content, in general they exhibited sound knowledge of a healthy diet. They were eager to feed their

children various types of food items because children get bored of one type of food, it helps develop their palate, keeps them healthy, and provides the nutrition required to grow.

Cerelac was mentioned by various mothers as a food item that should be part of a child's balanced diet. Mothers generally believed that Cerelac was a great meal for the baby and doctors were often found to corroborate this and encourage the use of Cerelac.

These days Cerelac is available in the market. I've heard that it fulfils the nutritional needs of the child because it contains all sorts of vitamins that the child needs. Alas, some people still aren't able to feed it to their child. – Mother's IDI, Lahore (rural), Punjab.

This demonstrates common misconceptions regarding the health benefits of Cerelac in Punjab.

Overall, several factors governed mothers' choices of specific food items for their children.

Some mothers selected foods on the basis of perceived nutritional value. Several mentioned they choose certain foods because they thought that these would help the child grow. Mothers were aware that breastmilk alone was not enough to support a young child's growth, and that a variety of foods was needed to meet their additional nutritional needs.

Some **mothers saw the initial years of complementary foods as a learning opportunity**, which should be used to enable to child to learn to eat, appreciate and digest different types of food so that they would become used to family foods. Some mothers were motivated to feed their children a variety of foods to develop their palate.

I usually give her a little bit of what I'm eating as well so that her taste gets developed. – Mother's IDI, Dera Ghazi Khan (urban), Punjab

I give him these foods so that he can get used to eating them. If I give these foods a few months later he will not be used to eating it and will most likely refuse to eat this. If you start feeding different foods like roti, rice, potatoes and vegetables early on than the child gets used to these more easily and their stomach is able to digest the food as well. – Mother's IDI, Multan (rural), Punjab

Additionally, mothers were **usually aware of their child's preferences and preferred to feed them foods that they enjoyed eating**, most likely due to convenience. Mothers and caregivers agreed that feeding a young baby or child required patience and time, about 15–30 minutes, which many mothers simply did not have. According to some caregivers who regularly fed their grandchildren, they combined play and entertainment to engage the baby while feeding otherwise the baby lost interest.

A motivator for choice of food was the mother's perception and experience regarding the child's ease of digestion. Mothers often believed that young children could not digest certain types of foods either because they were too complex for their stomachs to break down or because they lead to stomach-related problems such as diarrhoea. Specifically, we found that mothers believed that young children couldn't easily digest meat products, nuts and vegetables. This was probably based on their own experience and family or community beliefs and was a barrier to feeding a variety of food groups to young children.

Lack of adequate information about complementary feeding practices was mentioned by some of the interviewed mothers as a hindrance to good practice, as well as by several fathers and service providers.

Most of the service providers accessed by parents for children related issues do not have required knowledge themselves. Poor people mostly visit basic health units or private dispensers and seldom consult a proper qualified MBBS doctor. These service providers only give half-baked information which at times creates more problems. – Service provider's KII, Rawalpindi (urban), Punjab

However, **juxtaposed with this lack of knowledge or information amongst mothers was also the finding that parents and caregivers had multiple sources of information from family elders to media, healthcare providers, friends and neighbours.** Several mothers, caregivers and fathers mentioned LHWs as effective sources of information on managing children's health and nutrition issues. We found that LHWs, as frontline health workers, tried to use their own knowledge to address child nutrition concerns or advise on diet for young children, but had received no formal training on these matters.

Lack of economic resources, and in turn affordability, emerged as the main barriers to incorporating adequate quantity and diversity in children's diets. We found that affordability significantly influenced dietary diversity as parents fed their children a limited range of foods that they could afford to buy. It was mentioned that grains, roots and tubers, and shelf foods, were easier to afford, which made them part of children's staple diets.

I really want to feed her eggs on a daily basis, she even likes eating it, but we can't afford to buy them regularly. Meat is also a rarity at our house; we cook it after a full month sometimes. We can't afford to buy fruits either, even though all my children love eating them... when I have money I try to feed my children good food, but I rarely have the money to do so. – Mother's IDI, Bahawalpur (urban), Punjab

Additionally, **mothers preferred to provide food that could affordably fill the child's stomach and keep them satiated for longer.** *Roti*, potatoes, biscuit and rusk were reported to be such foods, reinforcing the reliance on grains, roots and tubers, and shelf foods.

I give my child these foods to satiate her hunger. When she gets hungry she starts crying. At that point I give her biscuits and others foods to prevent her from crying and to fill her tummy up. This is because I can no longer give her my breast milk so I have to give her something to keep her full. This is all I know, just that I have feed her to prevent her from staying hunger. – Mother's IDI, Lahore (rural), Punjab

We found that access to food was not a major problem in Punjab. Interviewed mothers said that they could find an appropriate variety of foods in their local markets. In some families women could walk to the market and get the child's food, whereas in a few families they were not allowed to leave the house unaccompanied and relied solely on male members of the household.

Lack of money is the only barrier in providing my children adequate food... in our area things are easily available in the market, and are not too expensive either, but we do not always have the money to buy them. – Father's IDI, Dera Ghazi Khan (rural), Punjab

In most parts of the country, respondents noted that they faced more barriers than enablers in providing appropriate complementary foods to their children, however, in Punjab we found some prudent practices that were enablers to complementary feeding. One interviewed mother in Punjab mentioned that **developing monthly budgets enabled her to provide adequate quantity and variety of foods for her family and children,** ensure it was consistently available throughout the month and to plan and prepare for issues in advance. She had also developed prudent ways of reducing her monetary expenditure to utilize the budget optimally.

I make a monthly budget and that makes it a bit easier to feed the family... but it becomes very difficult if the children demand certain foods, then I have to decide whether I can provide these to them or not. – Mother's IDI, Faisalabad (urban), Punjab

Thus, even for this mother, challenges remained that made budgeting difficult. We note that the successful implementation of a monthly budget depends largely on the level of financial literacy of family members, particularly the mother.

A few fathers also said that they kept a separate budget for young children's food keeping in view dietary needs like milk, cereals or fruits.

I try to keep aside some amount for children's milk and Cerelac for the baby. Because I know that these are essential dietary items for small children. – Fathers' FGD, Multan (urban), Punjab

By and large, however, most parents did not plan or budget for their young children's dietary requirements. The main reason attributed by respondents was lack of financial resources, which were not sufficient to cover specific meal plans for babies and young children.

Data from fathers reveal that a majority of families bought fortnightly or monthly rations of staple foods like rice, lentils, flour, sugar, tea, cooking oil etc. while other items like vegetables, fruits and eggs, etc., were bought daily or when needed. For food security purposes, the first priority of the household was to buy staples to ensure that basic needs of the family were met. Other items followed according to need and cash flow. This had a direct impact on CF practices.

Some parents were able to **cope with variations in cash flow by developing strong local networks** which allowed them to, for example, borrow from a local shopkeeper when liquidity was low. Similarly, a few parents turned to alternatives if they were unable to afford a particular food item. For example, a father in rural Sargodha said that when they did not have sufficient cash, they gave their baby diluted cow milk, or vegetables such as carrots and cucumbers instead of fruits.

A number of mothers, fathers and caregivers reported having no problems in providing a desired diet for infants and young children despite financial limitations, in terms of providing whatever was available, accessible and affordable for them.

We have no problems giving our baby the required food. We give him whatever is available in the house. The main thing is that he does not remain hungry and looks quite healthy to me. – Caregiver's IDI, Bahawalpur (rural), Punjab

1.6 Decision-makers

Summary findings

- Mothers and grandmothers were the key decision-makers regarding complementary feeding.
- Fathers had limited roles in feeding decisions and were in charge of the financial decisions.
- LHWs and healthcare providers played a significant role in influencing mothers' and caregivers' decisions regarding young children's diet and food intake.
- Older siblings, who acted as secondary caretakers, also played some role in determining the baby's food intake.

Mothers and the child's grandmothers often took decisions regarding continued complementary feeding. Mothers were the primary decision-makers, however, in many cases, the decision of what the child would be fed rested with the grandmother or mother-in-law. Fathers were found to be less involved as decision-makers on complementary feeding.

1.7 Influencers and information sources

Summary findings

- With greater access to healthcare providers, parents could obtain information about complementary feeding more readily.
- Healthcare providers accessed by parents lacked adequate information on child nutrition and recommended complementary feeding practices.
- Healthcare providers were found to be advising the use of branded products.
- Parents' reliance on television as a source of information was mixed, and was mostly limited to commercials, morning shows and food channels which gave recipes for various foods.
- Older female relatives remained amongst the main sources of information for both mothers and fathers, and transmitted traditional information which was sometimes based on misconceptions.
- Parents' education level positively contributed to CF practices.

A small proportion of interviewed mothers did not consult anyone when making decisions regarding complementary feeding and relied solely on their own knowledge and experience.

I don't take anyone's advice when deciding what to feed the child. I just make judgement on the basis of my own experience. Sometimes I feed him something new, and if he likes it I give it to him again but if he doesn't then I stop giving it to him. This is how I decide things on my own.

– Mother's IDI, Rawalpindi (urban), Punjab

For others interviewed, **the main influencers on decisions on complementary feeding were fathers, family elders and healthcare providers.** At the household level, the child's father, grandmother and at times grandfather influenced decision-makers. Family elders' opinions were often trusted because of their experience in the area. While some extended relatives were also found to influence decisions, we found a lower reliance on the opinion of other community members in Punjab.

I seek advice from my mothers and if the doctor is available then I ask him for advice as well. Other than that I get some information from television as well. I seek advice from these people because they are more experienced in this area. – Mother's IDI, Rawalpindi (rural), Punjab

According to a few community key informants in both urban and rural localities, there were had been evident changes in CF practices due to multiple influencers: the media (mostly television), LHWs, healthcare providers, and better education levels of mothers. It was also pointed out that people now had more social interactions, especially because of mobile phones, which also contributed to their information base.

Now almost everyone has mobile phones, it is easy to get in touch with anyone to ask for advice or suggestions. I think this has contributed to positive practices in complementary feeding as well. – LHW's KII, Faisalabad (rural), Punjab

Most interviewed households in Punjab had access to some form of healthcare in their own community, ranging from access to a government or private hospital to a local private clinic or dispensary. Mothers were generally satisfied with their ability to access healthcare services in their community. However, like other regions across the country, there was great reliance on home remedies including for diarrhoea management, with the child taken to a healthcare provider only if the condition persisted. Almost all mothers and caregivers were familiar with home remedies (such as giving green tea) for addressing diarrhoea and the need to increase a child's liquid intake in such cases.

Some mothers did seek to consult a healthcare provider specifically for nutritional advice if their child had become weak, while others consulted them about nutritional issues when they visited for health-related issues. Overall, we found that healthcare providers, doctors and LHWs alike, were consulted more often in Punjab than in other areas about decisions on complementary feeding. **Parents exhibited a sense of trust in the advice of LHWs and believed that healthcare providers were well-informed.** In most cases they were satisfied with their consultations with doctors. However, despite consultations with healthcare providers, other barriers prevented parents from providing their children adequate dietary frequency and diversity.

I have consulted an LHW and doctor regarding the nutritional needs of my child. They advised me to feed my child certain foods, but when I told my husband about it he told me to wait until we have the money to afford it. – Mother's IDI, Bahawalpur (rural), Punjab

It was also found that some healthcare providers were promoting the use of Cerelac and other packaged foods which increased the mother's likelihood of using the product.

Some mothers mentioned television as a source of information on CF practices, whereas others reported that they watched television but did not consider it a reliable source of information. Mothers who watched television for information often obtained it from advertisements about packaged foods, and occasionally from relevant programmes.

I mostly rely on the advice of LHWs because they come to our houses and tell us about complementary feeding. I don't watch television for such information because I don't think the information is reliable. – Mother's IDI, Gujranwala (rural), Punjab

1.8 Cross-cutting factors: WASH

The linkage between WASH and complementary feeding was recognized by almost everyone and mothers, fathers and caregivers alike emphasized the importance of clean utensils, handwashing and clean drinking water. Practices for washing and preparing a young child's feeding utensils were similar to those followed for the rest of the household. Some mothers reported that they maintained cleanliness before preparing the child's food and feeding the child. Most mothers were mostly concerned with washing utensils after use. Most mothers mentioned using detergent.

I wash my and my daughter's hand before we start eating food. We also wash our hands after using the toilet. This is because germs are transmitted through hands and these can make us sick.

– Mother's IDI, Sargodha (rural), Punjab

Use of soap for handwashing was not mentioned specifically, indicating possible use of plain water for handwashing. This is critical behaviour for a baby's wellbeing especially considering that most babies and young children are cared for by multiple family members including older siblings.

Children mostly drank the same water as the rest of the household. Water sources included piped water, wells and underground bores. Some mothers mentioned that they boiled or filtered water for the child, however not all were able to practice ways of ensuring water cleanliness.

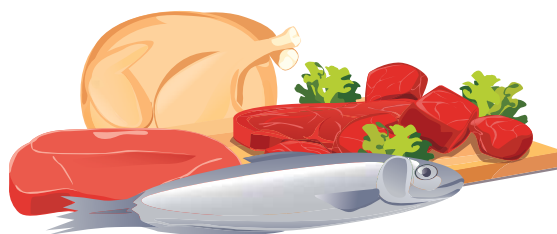
In Punjab, CF practices generally followed similar trends as the rest of the country. It was seen that introduction of complementary feeding reduced the frequency and quantity of breastmilk given to a child. While parents fed children different types of food, lack of finances resulted in greater reliance on grains and shelf foods. Mothers and grandmothers were key decision-makers on choice of foods, with LHWs and media serving as important sources of information. However, healthcare providers were observed to be providing incorrect information and were not informed of best practices themselves; a reality that will have to be addressed by any strategy on CF practices.





SINDH

FORMATIVE RESEARCH ON
COMPLEMENTARY FEEDING
PRACTICES



1 RESEARCH FINDINGS AND DISCUSSION

This section presents the research findings from urban and rural communities in six districts of Sindh. Overall, there were very slight variations between rural and urban localities which can be attributed to the fact that the study population had similar socioeconomic characteristics and, in most instances, had migrated to the cities from rural areas for better economic opportunities. Thus, most urban residents were actually first-generation rural migrants.

Other variables that had been hypothesized as significant in influencing children's feeding practices were education of parents, household size, age of baby (6–11 months and 12–23 months), and current breastfeeding. The research findings reveal that none of these variables had a conclusive impact on parents' CF practices, with the exception of current breastfeeding status, which had some effect on mothers' practices. Sources of information for complementary feeding and children's nutrition were also mostly the same, further explaining similar perceptions, behaviours and attitudes.

1.1 Study population's socioeconomic characteristics

Both urban and rural localities were selected to assess differentials according to socioeconomic conditions, accessibility and availability of social services including markets. However, in all communities data were collected from low to lower-middle income households representing the mainstream population of the selected locality.

Demographic characteristics were similar amongst urban and rural communities, with the minimum age of the mother being 20 years

and maximum 45 years. In most cases the selected baby was youngest in order of birth with the exception of a few with younger siblings. The minimum age of father was 26 years and the maximum was 42 years. Caregivers, as the children's grandmothers, were aged 47–65 years. Household size was quite high, with a mean of eight people. Joint family structures were common in both urban and rural areas, mostly with one or both parents living with a son or sons.

Education levels were very low amongst mothers and caregivers. A large number of mothers had never attended school; a small number had attended primary school; a noticeable number had matriculated; and less than ten had a college education. Amongst the 24 mothers who participated in IDIs, five had lower secondary school education and one was a graduate. Most caregivers had no education at all, and only a few had attended primary school. Fathers were relatively better educated and more than half had school education, while a few who had attended college.

In rural localities, most households were dependent on daily labour or farming, working mostly as labour or tenants on others' land. In urban localities, daily labour and small businesses were the most common occupations. A significant number of men in urban localities had small shops with a number of respondents who were employed in the service sector. Female employment was not common but a noticeable number of women were gainfully employed as teachers or as part-time domestic workers. A number of women also earned some income through home-based handicraft work or tailoring. It was also common for women and children to participate in seasonal agricultural activities, helping families to financially sustain themselves. Female mobility was not as limited as in some other regions of the country, and in most communities, women could freely go out of the house. However, when going out of the community, women mostly went in groups or were accompanied by their male family members. Only in two communities of Nawabshah and Sukkur (one rural and one urban), women and men said that women in their communities were not allowed to go out without permission from male family members.

In case of emergencies, women in our community can go out but preferably with a male family member. Female mobility inside the community is generally accepted. – Fathers' FGD, Tharparkar (rural), Sindh

Most respondents lived in small housing units comprising 2–3 rooms with small outside sheds or spaces as kitchens. The construction was mostly unbaked bricks with partial cemented or baked structures. Amongst the 24 interviewed mothers, 15 lived in permanent structures and nine lived in *katcha* structures. There was no difference between rural and urban localities in terms of availability of basic services like water, electricity and housing structure. Sources of water varied, with tap water or government water supply available in most communities, with a few rural communities who used groundwater through hand pumps.

1.2 Gender roles and responsibilities at household level

Men and women had clear roles and responsibility at the household level and outside it (see Table 1). While everyday household chores like washing, cleaning, cooking and caring for the children and family were women's responsibility, earning and providing for the family was mostly the responsibility of men. Women who worked only supplemented in the family income and were not held responsible for providing a regular income for the family.

From conversations with parents, caregivers and key informants, it was clear that, like all the other physical and caring needs of young children, feeding was considered primarily the responsibility of the mother. The father's role was defined more in terms of providing food, while cleaning, cooking, serving and feeding was either the mother's responsibility or, if she was unavailable, that of any other female family members. Only two mothers out of 24 interviewed said that their husbands sometimes helped them feed the baby if they were busy. Joint family structures were common, and other family members also contributed to household expenditures and helped attend to children. Grandmothers, aunts and older siblings played an important role as caregivers and assisted the mother in tending to babies and young children by cleaning, bathing, changing and feeding them.

Data from caregivers also indicate a clear attribution of domestic roles and responsibilities to men and women. The perception of caregivers in this regard is of especial importance: as the older generation they were responsible for transmitting customs to the next generation including gender roles. Grandmothers in both urban and rural localities were of the opinion that taking care of children, including feeding them, was mainly the responsibility of the mother, supported by other women in the family. The father's role was as the provider and looking after all outside errands including buying groceries.

Decisions related to household matters rest with the women of the house and men did not play an active role in deciding about everyday domestic issues. They have enough responsibilities outside the house.
– Caregiver's IDI, Larkana (rural), Sindh

Table 1: Community perceptions of gender roles and responsibilities

FATHERS' ROLES AND RESPONSIBILITIES	MOTHERS' ROLES AND RESPONSIBILITIES
<ul style="list-style-type: none"> • Earning a living and fulfilling the needs of the family. • Buying household groceries and food rations. • Taking unwell family members and children to hospital or doctor's clinic. 	<ul style="list-style-type: none"> • Taking responsibility for all domestic chores, like preparing food for the family, taking care of children, cleaning the house, etc. • Tending to livestock and performing farm labour (rural Larkana and Tharparkar). • Attending to children's schooling and everyday education needs (rural Hyderabad and Larkana). • Collecting water and fuelwood. • Maintenance of the house, e.g. plastering the walls with clay (rural). • Taking care of the husband (rural Tharparkar and Nawabshah).

1.3 Breastfeeding and its relationship to complementary feeding

Summary findings

- Breastfeeding practices, especially continued breastfeeding, could have an adverse effect on CF initiation, in the form of both early and delayed introduction to semi-solid food.
- Breastfeeding was universally promoted by everyone, and parents and caregivers strongly endorsed breastfeeding for at least two years.
- Mothers and caregivers did not have a clear understanding of exclusive breastfeeding and babies were given other liquids during the so-called exclusive breastfeeding phase.
- Colostrum feeding was generally encouraged by most mothers and caregivers with only a small number who believed it to be unfit for the baby's consumption.
- Breastmilk was substituted for semi-solid and solid food by a significant number of mothers due to poor economic conditions and convenience.

The findings from Sindh show strong indications of the impacts of breastfeeding practices on the age of introduction to semi-solid foods, minimum meal frequency and, to some extent, minimum dietary diversity.

As in other regions, breastfeeding was universally endorsed by all respondents and considered the preferred diet for a baby. Regardless of age, education, creed or economic conditions, men and women, mothers, fathers, caregivers and service providers agreed that breastfeeding should ideally be practiced by all mothers for two years unless there was a medical problem or breastmilk was not sufficient for the baby.

All women in our community breastfeed their babies, because it is the best food for the baby. Breastfeeding is even encouraged in Islam which tells us that it is the best food for the baby and also its right which has been provided by Allah for this purpose. – Caregivers' FGD, Sukkur (rural), Sindh

While the importance of breastfeeding was mentioned by everyone, **initiation of breastfeeding and exclusive breastfeeding remained grey areas**. Although most mothers said that breastfeeding was initiated immediately or soon after birth, many were unable to recall the exact time. The responses varied and were stated in very general terms.

I breastfed all my children soon after the delivery, because the doctor told me to do so. I think 2–3 hours later. – Mothers' FGD, Sukkur (urban), Sindh

I think I initiated breastfeeding 1–2 hours after delivery of my baby. – Mother's IDI, Larkana (rural), Sindh

I fed my baby within an hour to one hour or so. – Mother's IDI, Hyderabad (urban), Sindh

Similarly, all six interviewed fathers said that all their children were breastfed and reiterated the importance of breastfeeding and its practice up to 2–2.5 years, but their responses regarding the

initiation of breastfeeding varied from within an hour of birth (two respondents) to two hours (three respondents), to two days (one respondent).

Knowledge and practice of exclusive breastfeeding was another area requiring further clarity. There are indications that understanding of exclusive breastfeeding amongst mothers and caregivers was based on the misconception that it was acceptable to give other liquids in addition to breastmilk, like water, tea, or supplementary milk. A significant number of women mentioned a duration of six months for exclusive breastfeeding but actual practice needs investigation. Out of 24 interviewed mothers in urban and rural communities, only two said that they had not given even a drop of water to the baby, during the first four and first six months, respectively. These findings support the NNS (2011) data for Sindh in which only 23.5 per cent of mothers reported four months of exclusive breastfeeding and 9.6 percent six months.

A significant number of women and service providers reported that the practice of feeding colostrum had become more common and mothers and caregivers were increasingly aware of its benefits. In a mothers' FGD in rural Sukkur, only a few participants said that colostrum was thrown away and the baby was usually breastfed after two days, once the colostrum had dried up.

We don't give colostrum to our babies because it is not good for them. The baby's digestion becomes upset as the first milk is dirty and it has adverse effect on the baby's health.

– Mothers' FGD, Sukkur (rural), Sindh

The research further confirms NNS findings (2011) that Sindh has a high rate of continued breastfeeding (84.4 per cent). Fifteen mothers out of 24 were currently breastfeeding their babies (8–23 months) with all planning to continue at least to two years of age. **Continued breastfeeding seemed to have an impact on initiation of complementary feeding, with a noticeable number of mothers reporting delays in introducing semi-solids.** This was because the baby continued to breastfeed several times a day and mothers found it convenient, either for economic reasons, or because of lack of awareness regarding age-appropriate feeding.

I started my baby on soft foods when she was around eight months old because I was breastfeeding her and she seemed quite satisfied. I did not find the need to give her other foods. But I sometimes gave her tea and water in addition to breastmilk. – Mothers' FGD, Nawabshah (urban), Sindh

My baby is over eight months now and I still breastfeed her. Other than my milk, I only give her diluted wheat cooked in sugar water. – Mother's IDI, Tharparkar (rural), Sindh

Another possible effect of breastfeeding was early initiation of complementary feeding, especially in case of exclusive breastfeeding. A significant number of women said that they started giving the baby semi-solid foods at four months of age, like diluted Cerelac, fresh milk, or diluted wheat cooked in sugar, water or milk, because the baby remained hungry after breastfeeding.

I started giving my baby Cerelac, milk and rice, soft khichri when he was four months old because I think he was ready for it and my milk was not enough for him. – Mother's IDI, Hyderabad (rural), Sindh

Furthermore, **it is plausible for breastfeeding practices to have considerable impact on young children's food diversity and frequency.** It needs to be kept in mind that most mothers felt that breastfeeding was safe, convenient and free of cost. Mothers often compensated for food with breastmilk as it was less troublesome than preparing food and then feeding it to the child. This also relates to the high frequency of breastfeeding reported by most mothers, who breastfed on

demand, resulting in less food intake by the baby. In the two-day dietary recall of the mothers, it was noted that out of 15 currently breastfeeding mothers, 11 were breastfeeding their babies (eight months and above) 6–7 times a day or on demand. Even some of the mothers conceded that frequent breastfeeding had an impact on the baby's appetite.

I do know that my baby eats less because he takes breastmilk so many times a day. But he refuses to eat anything and I have to give him something to fill his stomach so I breastfeed him whenever he demands.

– Mother's IDI, Hyderabad (urban), Sindh

1.4 Complementary feeding practices

Summary findings

- In Sindh the age at which semi-solid foods were introduced varied not by rural/urban locality or socioeconomic characteristics, but by individual behaviours.
- Most babies were introduced to semi-solid foods aged 4–7 months.
- The most commonly given first foods were roti, biscuits, cooked wheat, diluted halwa and tea.
- Dietary diversity was lacking, with most babies given only three essential food groups or fewer.
- Young children and babies were usually not fed separately but were given the same food as the rest of the family.
- Meal frequency was determined by the baby's demand, while older children were usually given three meals a day alongside the rest of the family.
- Lack of awareness and poor information sources were among the most prominent barriers to a balanced diet for babies and young children.
- Economic limitations were another major barrier to providing appropriate and acceptable diet for children aged 6–23 months.
- Accessibility to markets and availability of appropriate food items were also barriers, especially in rural communities.

1.5 Initiation of solid and semi-solid foods

The age of introducing complementary feeding varied across different mothers and was not dependent on rural/urban, socioeconomic or district-wise differentials. A number of people initiated soft foods to the baby as early as 3–4 months of age. One caregiver in rural Larkana said that in their village it was common to start the baby on Cerelac, supplementary milk and other liquid foods at this age, and if the mother's milk was not enough then these might be given as soon as 40 days after birth. Eight mothers out of the 24 interviewed said that they introduced their babies to semi-solid foods aged 4–5 months **starting with foods like Cerelac, water, goat milk and soft rice. In a few communities, younger babies were also given traditional foods as first foods such as *dakka*, a mixture of butter, honey, cardamom and mint.** The latter is given as an energizer and considered soothing for the digestive system.

Key informants in most communities, including urban areas, said that parents usually introduced babies to semi-solids at 4–5 months of age. In urban Hyderabad and Nawabshah, interviewed healthcare providers were of the view that parents in urban areas were more inclined towards the early initiation of semi-solids because of more choices, easier accessibility to markets and to some extent better economic conditions.

Parents who can afford to buy formula milks, Cerelac and other canned baby foods start giving their babies semi-solid foods at around four months of age, because they think it will help their baby's development and growth. – Private general physician KII, Nawabshah (urban), Sindh

However, **mothers and fathers in general, and many caregivers, were aware that the appropriate age for introducing the baby to semi-solids was 6–7 months. But, in practice, the introduction of complementary food was either delayed or early, largely due to lack of information.** Although, most key informants and service providers in all six districts felt that there was a major shift in community behaviours regarding breastfeeding practices, age-appropriate feeding practices for children, including nutritious foods, diarrhoea management, and improved WASH behaviour, effective outcomes may only be achieved with continued efforts by all stakeholders, especially the government.

There is a need to build the capacity of the local health practitioners on child feeding practices as most of the doctors are general physicians and don't have enough information on dietary and nutrition-related problems. Furthermore, growth charts and food charts should also be provided at private clinics as well as government facilities to facilitate the service provider and also the patient. – Private healthcare providers' FGD, Sukkur (urban), Sindh

First foods mentioned by all were rice in milk, diluted wheat halwa, khichri, biscuits soaked in tea or milk, packed cupcakes soaked in tea or milk, in addition to water and milk by itself (either breastmilk or fresh milk which was more common in rural areas). Cerelac was another common introductory baby food preferred by a noticeable number of parents and caregivers, and was reported to be suggested by healthcare providers. While mothers, fathers and caregivers particularly mentioned certain types of foods that they considered appropriate for babies, both those younger than 7–8 months and older, in practice the data revealed a different narrative. Most parents and caregivers openly stated that babies were mostly fed the same food as rest of the family, although younger babies could not digest or chew adult foods so required a soft diet.

We mostly give our children including the baby whatever is cooked at home for the rest of the family. We are poor people and can't afford to prepare special food for babies.
 – Fathers' FGD, Larkana (rural), Sindh.

Many mothers said older children, aged above eight months, were given pieces of roti to nibble at during the day, which worked as a snack as well as a meal.

According to the majority of fathers, there was no specific household budget for young children's food, therefore any spending on children's dietary needs would be an extra burden on their household expenditure.

All family members depend on the same groceries so whatever is given to the baby is also from the same ration as the rest of the family. In case of any extra expenditure, people mostly have to take loans because their income is so tight. – Mothers' FGD, Tharparkar (rural), Sindh

A common perception was that the poor fed their children home-cooked food and the economically better-off fed their children packed shelf foods. Several parents felt that their children were deprived of proper nutrition because they were not able to provide them Cerelac, biscuits, cakes and formula milk.

1.5.1 Minimum dietary diversity

Meal frequency was mostly on demand, with younger babies fed when they cried, while older ones were fed along with the rest of the family, generally three times a day. It can be assumed that babies fed during family meal times did not receive full attention as the mother was preoccupied with serving other family members and thus could not properly assess his or her intake. However, mothers and caregivers said that they knew when the baby had had enough because he or she refused to eat any more or started to spit out the food. Meal frequency was lower in rural localities, probably because of poorer economic conditions as well as accessibility to and availability of the required food items.

Gender discrimination or bias was not evident or reflected in the data. Fathers, mothers and caregivers said that for them there was no difference between sons and daughters including the foods they were given. Interviews and FGDs with service providers and key informants also show that there were no gender biases in CF practices. Parents and caregivers alike said they did not differentiate between children by gender.

Times have changed now and people don't think in terms of gender of the baby. For us they are both the same as they are our children so there is no difference if it is a boy or a girl.
 – Caregivers' FGD, Karachi (urban), Sindh

1.5.2 Minimum meal frequency

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– Caregivers' FGD, Karachi (urban), Sindh

1.5.3 Minimum acceptable diet

Availability, accessibility and affordability were considered the main barriers to providing food diversity to young children. Especially in Tharparkar (rural and urban), Nawabshah (rural) and Larkana (rural), respondents said that access to markets was difficult and quality food items were not available. Limited female mobility and economic pressures were other contributing factors that influenced feeding practices. However, a notable number of parents also said that they did not have any economic difficulty in providing adequate food for their babies, which appears contrary to the actual food being given. This indicates that either the mothers lacked knowledge or were unaware of the consequences of poor nutrition. Out of the seven mothers who said that they did not face economic barriers in providing food, six were from rural communities, which might contribute to their understanding of adequate food.

We feed the baby as much as she wants and she rarely cries from hunger. I am a mother so naturally I know when my baby is hungry. I give her everything she wants to eat.

– Mother's IDI, Karachi (rural), Sindh

Young children also regularly consumed chips, papar and packed juices as regular snacks during the two days prior to IDIs, as reported by seven mothers. According to one, her son enjoyed chips and demanded them almost every day, afterwards losing his appetite for proper meals.

The mothers' interviews showed that very few babies were fed meat products/ flesh foods, nuts and legumes. Only two mothers said that they had given their children meat (fish and chicken respectively), for a single meal in the last two days. Similarly, two mothers said that they had fed almonds to their babies in the past 48 hours. Even during the FGDs with mothers and caregivers, while several participants mentioned various food groups like eggs, meat, butter, ghee,

fruits, vegetables and cereals, very few were actually feeding these items to babies. **Data indicate that out of the seven main food groups required for a balanced diet for infants and young children, most babies only received three.**

While most respondents agreed about the importance of giving water to children, they mostly gave water if the child asked for it or the mother felt that the child was thirsty because their lips were dry.

1.6 Decision-makers, influencers and information sources

Summary findings

- Decision-making on complementary feeding was largely the responsibility of the mother, however it was influenced by female family elders who transmitted their knowledge to the mother and provided her with advice.
- The role of the father was limited but could not be completely ruled out as he, to a certain extent, would pass on information to the mother and also had the power, from his authority within the family, to influence or overrule the mother's decision.
- LHWs and healthcare service providers also played an important role in influencing the mother and caregivers regarding adequate and acceptable diet for children aged 6–23 months.
- The role of media as a source of information was limited, especially the print media and radio. Television was reported to be effective in creating awareness in some areas of child nutrition and adequate diet.

Decision-making regarding complementary feeding was mostly by the mother, with a significant role played by female family elders such as mothers and mothers-in-law. Mothers played a significant role in influencing daughters' behaviours in childrearing including complementary feeding.

Mothers play an important role in influencing the decisions of the baby's mother regarding breastfeeding and CF practices. Women mostly go to their mothers' home for child delivery and spend over 40 days there. During this period, her mother guides her and advises her on childcare including feeding practices. Other than mothers, mothers-in-law also have a strong say in children's upbringing and caring practices.
– Female community opinion maker's KII, Hyderabad (urban), Sindh

Only three interviewed urban fathers said that they contributed to decision-making regarding their children's food intake and nutrition needs, and tried to support their wives by bringing home food items for the baby, like bananas or other seasonal fruits and vegetables, to add variety and nutritious value. **However, the role of the father as an influencer cannot be completely ruled out as in some instances fathers influenced mothers' decisions by providing information they obtained from others or from the media.**

LHWs had influence on decision-making, as mentioned by a significant number of women in both urban and rural localities. Mothers and caregivers said that they received a lot of information from LHWs who gave them advice on children's nutrition needs and sometimes also gave suggestions about recipes that could be prepared at home and were good for babies.

Healthcare providers, that is doctors visited by the parents for addressing child nutrition and health problems, also provided information to mothers on childcare and feeding practices. According to both fathers and mothers, healthcare providers advised on the types of food recommended for young babies as well as dietary needs during diarrhoea and other illnesses.

The doctor has told me that I should continue to breastfeed the baby during diarrhoea and also continue to feed her soft foods. He has also told me to give lots of liquid to the baby if she has diarrhoea, and to give her boiled water when her stomach is loose. – Mothers' FGD, Nawabshah (urban), Sindh

Twenty out of 24 mothers interviewed said that there were no child-specific services available, or if there were any, they were unaffordable. In urban localities of Karachi, Hyderabad and Sukkur, mothers and fathers said that there were many child specialists in the cities but were costly. For this reason, they either went to low-cost private general physicians or government health facilities. Similarly patterns of health-seeking behaviour in rural communities showed that poor households visited government facilities and better-off families preferred private healthcare providers due to better quality services and shorter waiting times.

Media sources were mentioned by a limited number of respondents. Only a few mothers and fathers had watched supplementary milk or Cerelac advertisements on television, or morning shows with a segment on child nutrition. No one mentioned print media or radio in context of information related to complementary feeding or child nutrition.

None of the community women mentioned sessions organized by LHWs although in two rural communities of Larkana and Tharparkar, mothers as well as fathers mentioned NGOs working on child nutrition and the distribution of ready-to-use therapeutic food at government basic health units.

I went to the basic health unit with my baby daughter and there was a team there from a NGO called HANDS which gave me a packet of ready-to-use therapeutic food because the doctor checked my daughter and said that she was underweight. I have been giving her this food for almost two months now and she is healthier now compared to before. Such services should be provided regularly.
– Father's IDI, Larkana (rural), Sindh

1.7 Cross-cutting factors: WASH

The linkage between WASH and complementary feeding was recognized by almost everyone and parents and caregivers emphasized the importance of clean utensils, handwashing and clean drinking water. But, while standard practices were carried out regarding cleaning of utensils, no specific practice was adopted for washing the baby's feeding utensils. Detergent was not regularly used for dishwashing in every household and a number of mothers (more in rural areas) said that they washed their dishes and utensils with sand or ash when detergent was not available.

Handwashing was again claimed to be a regular practice but data reveal that handwashing with soap was not very regular and water was usually considered adequate for washing hands including before feeding the baby.

The majority of mothers and caregivers said that babies drank the same water as other household members. Households consumed water from taps and government water supplies as well as hand pumps. In all instances, there was a high chance of unclean water being consumed by everyone including babies. Although some mothers did mention the poor quality of water in their communities, no measures, such as boiling, were taken to address this problem.





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