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The Pakistan NGO Initiative Health Network

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**Improving Young Child Feeding and Caring Practices
in Pakistan:**

**Analysis of In-depth Interviews and Trials of Improved Practices
(TIPs)**

MotherCare/The Manoff Group
The Asia Foundation and Collaborating NGOs

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This document is published to provide program managers and policy makers from NGOs, government, and donors with the information collected in a recent formative research study conducted in Pakistan under the USAID-funded Pakistan NGO Initiative (PNI) consisting of grant and technical assistance to NGOs.

The program was initially managed by Ms. Judith Standley, under the technical assistance provided by Wellstart International in collaboration with Mr. Mark McKenna, Program Director for PNI at TAF. This work for community-based promotion of breastfeeding was based on the communication strategy developed from the qualitative research work initiated by the national Breastfeeding Steering Committee in 1990. PNI is being implemented by The Asia Foundation (TAF), with technical assistance provided by MotherCare, BASICS, and Wellstart EBP, three global USAID projects.

In December 1996 the team decided to undertake more formative research on additional areas of maternal and infant health and nutrition. Ms. Naveeda Khawaja, Program Coordinator for MotherCare and Resident Health Adviser to PNI, led this second phase of formative research, IEC design, and curriculum development. MotherCare consultants Dr. Fehmida Jalil (a senior researcher and leading pediatrician) and Ms. Anila Daulatzai (an anthropologist with much experience in qualitative research) reviewed available literature in Pakistan on maternal and child health, particularly child feeding issues.

This report presents the findings from research on child health and nutrition. These findings are summarized, along with findings on maternal health and nutrition, in *Taking Charge: What Families in Pakistan Can Do to Improve the Health of Mothers and Young Children*, also available from TAF.

MotherCare/Manoff consultants Dr. Jalil and Ms. Abida Aziz, and Ms. Khawaja formed the core team and carried out the research activities. They were responsible for development and pre-testing of the research instruments, training of the NGO partners, coordination of the data collection, data tabulation, data analysis, and initial report writing. Their inputs into the implementation of the research were invaluable, as were their enthusiasm and dedication to building the capacity of NGOs and boosting the morale of the NGO staff in this lengthy process.

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Glossary

Aarq	Essence of flowers (rose, etc.) diluted in water
Amaltaas	Herbal remedy of flower petals ground with water
Baqarkhani	Bakery product
Cerelac	Local brand, ready-made semi-solid diet including wheat, barley, oats
Chella	Ritual period of 40-days after child birth
Choolay	Grams
Choori	Roti mashed with sugar and ghee
Daal	Cooked dried legumes, usually lentils
Dai	Traditional Birth Attendant (TBA)
Dalya	Wheat porridge
Farex	Cereal
Firni	Sweet dish made up of rice, milk and sugar
Gajreela	Sweet dish made up of carrots, sugar, milk and dry nuts
Ghee	Clarified butter
Ghutti	Mixture given as ritual first food to new-borns, and later to soothe the infant
Gound	Tree sap (used to make panjeeri)
Gravy	Broth
Halwa	Sweet dish made up of semolina, ghee and dry nuts
Imlok	Kind of dry-fruit
Jaleebi	Sweetmeat made from refined flour, sugar, food color and fried in ghee.
Kalakand	Sweetmeat made from milk, sugar
Kheer	Sweet dish of rice, sugar and milk
Khichri	Rice and daal
Khoon ki Kami	Deficiency of blood, Anemia
Lassi	Yogurt mixed in water to make a drink
Namak-Paray	Fried saltish snack made up of flour
Nimko	Snack made up of fried grams, lentils, potato chips, peanuts, etc.
ORS	Oral Rehydration Salt
Pakoray	Deep fried saltish snack (Flour of gram and vegetables)
Palak	Spinach
Panjeeri	Sweet dish made up of semolina, dried nuts, sugar, gound and ghee/oil
Paratha	Roti fried in oil/ghee
Qaawa	Green tea
Roti	Flat bread made up of flour
Rusk	Dried-up bread
Saag	Spinach/mustard leaves
Salan	Curry
Saunf	Aniseed
Sheera	Thick mixture of water and sugar
Sherbat	Drink made of water diluted with some fruity/artificial flavour
Suji	Semolina
Tandoor	Big oven where flat bread is baked
Taqat	Energy
Yakhni	Soup

Abbreviations

APPNA-Sehat	Association of Pakistani Physicians in North America
ARI	Acute respiratory infection
BHU	Basic health unit
BRSP	Balochistan Rural Support Program
DIL	Daughter-in-law
FIL	Father-in-law
HANDS	Health and Nutrition Development Society
IDI	In-depth interview
LHV	Lady health visitor
LHW	Lady health worker
MC	MotherCare
MCWAP	Maternity and Child Welfare Association of Pakistan
MIL	Mother-in-law
MDM	Medicine-du-Monde
NWFP	North West Frontier Province
OPD	Organization for Participatory Development
Pak-CDP	Pakistan Community Development Program
PNI	Pakistan NGO Initiative
SIL	Sister-in-law
SSS	Sugar-salt solution
TAF	The Asia Foundation
TBA	Traditional birth attendant
TIPs	Trials of Improved Practices
TOT	Training of trainers
USAID	United States Agency for International Development

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I. Executive Summary

During the past decade the Government of Pakistan has been working to change existing infant feeding practices that contribute to poor infant nutritional status and high infant morbidity and mortality rates. The results of the formative research described here will be used to inform the development of educational and counseling materials and activities designed to help improve the way mothers feed their young children. Researchers carried out in-depth interviews with mothers of healthy young children, young children with diarrhea, and young children who were recovering from illness to gain a better understanding of their beliefs and practices regarding the care and feeding of their children. Due to the fact that decisions related to health care and nutrition are not made in isolation from other members of the society, researchers also identified three main categories of persons who could influence mothers' decision-making. In-depth interviews were therefore conducted with mothers-in-law (MILs), fathers, and health care providers, who comprised doctors, lady health volunteers (LHVs), lady health workers (LHWs), and dais (traditional birth attendants).

Researchers' interviews with mothers of healthy children from six months to twenty-four months old revealed that most of the mothers are still breastfeeding their children and intend to continue doing so until the children are anywhere from two to three years old. Many mothers, however, also bottle-feed their children, often because they fear that they do not produce enough milk to satisfy them. Anywhere from one-third to one-half of the mothers interviewed indicated that they bottle-feed their children to be sure that they receive enough nourishment, and many add that they have been encouraged to do so by their MILs, husbands, or doctors.

Mothers also reported introducing complementary foods to their children at a variety of ages, ranging from four to twelve months old. More than half of the mothers started their children on semi-solids later than the recommended time (six months of age). Although the decision about when to introduce complementary foods seems to be influenced by advice from relatives, such as a mother's own mother, her mother-in-law, or her husband, the women interviewed also reported that they took cues from the children themselves in regards to their feeding. Several mothers reported waiting to start their children on semi-solids until they reach out for a food or indicate interest in some other way, and many mothers report deciding how much food to feed a child as a result of the child's level of interest in eating. Approximately one-half of the mothers feeding their children semi-solids reported giving the children their own bowl or plate of food, while the other half have the children share their bowls.

The research indicates that there is not enough nutritional variety in what the children are eating to assure them of a balanced diet. Most notably, the children are receiving too little vitamin A, vitamin C, and iron. A number of food taboos restrict what the child is given; however, many of the forbidden foods would in fact provide children with some of the nutrients they are lacking. For example, few mothers report giving their children fruits, vegetables, or

meat, because these are often seen as harmful to or hard to digest for a young child. Children are often not fed the same food or at the same time as the rest of the family.

During interviews with mothers of children zero to twenty-four months with diarrhea, researchers found that although breastfeeding mothers tend to continue to breastfeed their children through episodes of diarrhea, many of them have a number of questions and concerns regarding how to deal with the child during illness. For example, they expressed doubts about how often to suckle the child, whether to begin complementary feeding of a child previously only breastfed, and whether to give the child medicine to stop the diarrhea. Some mothers said that certain foods, such as bananas, are beneficial for the child with diarrhea. Many mothers mentioned food taboos that affect the diet not only of the child with diarrhea, but also of the lactating mother. Although only a few mothers of children under six months old with diarrhea reported bottle-feeding their children, nearly one-third of the mothers of children ages six to twenty-four months with diarrhea were bottle-feeding their children at least some of the time, many upon the advice of their husbands, MILs, and mothers. A majority of the mothers also reported beginning complementary foods with their children at seven months of age or later.

When researchers interviewed mothers of children recovering from illness, they found that some mothers increased breastfeeding during this period, while others decreased it or kept it at the same level. Opinions regarding when to introduce semi-solid foods varied, and a number of food taboos were mentioned.

Mothers-in-law seemed to be well-informed of and very involved in the care and feeding of their young grandchildren, and many of them reported offering advice to their daughters-in-law regarding what and how to feed them. Fathers tended to know much of what their children ate, but did not often know how much or how often they ate. This may be because fathers often shop for the food, but mothers (or sometimes mothers-in-law or other female relatives) usually feed the children and prepare the food.

Doctors, LHVs, LHWs, and dais (trained or untrained traditional birth attendants), reported providing families with advice concerning child nutrition. There is, however, considerable variation in the advice they report giving, not only among the members of each group of health workers, but among the groups as well. LHVs, LHWs, and dais reported making house visits, although dais limit theirs to the postpartum period.

The Trials of Improved Practices (TIPs) that were part of this research tested recommendations with mothers of healthy children, children with diarrhea, and children recovering from illness regarding breastfeeding, introduction of complementary foods, variety of foods, frequency of feedings, and quantity of food given at each meal. Of particular concern to researchers was that most children involved in this research were receiving fewer calories per day than necessary for their age and state of health.

Most mothers were able to significantly improve their children's diets in at least one of the following ways:

- Increasing frequency of breastfeeding

- Mixing milk in foods (as opposed to serving it as a drink)
- Giving soft foods between breastfeeds
- Increasing the frequency of meals
- Improving variety by giving children the same foods as the rest of the family and adding seasonal vegetables and fruits to the child's diet

Despite significant improvements in caloric intake, only children in the younger healthy group (ages 6 - 11 months) reached an optimal number of daily calories. Improvements in the diets of younger and older sick or recovering children and older healthy children did not sufficiently raise their caloric intake. In a number of cases, children were receiving so many fewer calories to begin with that the improvements made by mothers were still not enough to raise their caloric intake to an appropriate level.

Mothers reported that they were able to adopt these practices for at least one of the following three main reasons: they wanted to improve their children's health and believed that these recommendations would help them do so, the practices were easy to carry out, and they were practices that did not take a lot of extra time.

A majority of the recommendations that may be made as a result of this research focus upon specific ways in which mothers can improve the diets of their children under two years of age. Many suggestions are also made regarding the support that influential family members, such as husbands and mothers-in-law, and health care providers, such as doctors, lady health visitors, lady health workers, and dais, can provide to the mothers in their efforts to improve the nutritional status of their children. In addition, the research suggests a need for improved sanitary practices on the part of the mothers as they prepare food and serve it to their children, and it is recommended that efforts be made to ensure improved vaccination coverage of children under two years of age.

II. Project Background

The Pakistan NGO Initiative (PNI), launched in 1995, is a USAID-funded project implemented through The Asia Foundation (TAF). The project was designed to strengthen NGO (non-governmental organization) capacity to work with local communities to access and deliver improved social sector services, with emphasis on maternal health, child survival, female education and family planning. Technical assistance in health is provided by cooperating agencies: MotherCare/Manoff, BASICS and Wellstart International's Expanded Promotion of Breastfeeding Program (EPB).

In December 1995, an initial dialogue with a select group of NGO partners representing all provinces (See NGO profiles Annex A) revealed a demand for (low-literacy) health education materials to promote breastfeeding. With technical assistance from Wellstart and the Manoff Group, the NGO workers developed, pretested and revised educational and counseling cards and cassette tapes, as well as a community-based health and nutrition curriculum for use in women's support groups. Groups were established at the community level to accommodate

the needs of breastfeeding women, pregnant women, and mothers of babies over six months, engaging local women in dialogue and action to strengthen their knowledge and ability to promote and practice positive health and nutrition behaviors.

At a PNI planning meeting held in December 1996, the need was expressed for more formative research in the areas of infant nutrition and feeding during illness and recovery, maternal nutrition, and prenatal care, in order to develop more educational and counseling materials. Partner NGOs were integral to conducting this formative research in preparation for the development of a second series of counseling cards and revision and addition several chapters of the curriculum.

A. Research Methodology

Objectives

The objectives of the research were as follows:

Gather information to guide the development of IEC strategies at the national and local levels.

- Increase program planners' understanding of mothers', fathers', and mothers-in-law's beliefs about infant feeding, their reasons for current practices related to child nutrition, and their motivations and constraints to changing behavior.
- Investigate current beliefs on infant feeding of various community and health facility-based health workers, and assess their motivations and constraints to providing counseling on infant feeding.
- Build capacity of NGOs to do qualitative/formative research and to design community-based nutrition interventions.
- Test the acceptability and feasibility of potential recommendations for improving young child feeding at the household level.
- Revise behavioral grids, which were based on literature research, in the light of new research.
- Develop and revise new counselling cards.
- Revise three chapters of the curriculum (Child Health and Nutrition, Maternal Health and Nutrition, and Child Spacing), counselling cards, and support group chapters.

Literature Review

The MotherCare Program Coordinator and two local MotherCare/Manoff consultants conducted a thorough review of qualitative research studies on breastfeeding and other child feeding practices. Their synthesis of published and un-published documents included an

Formative Research Sample for Child Health

Participants	Method Used	Total	Rural Urban	Balochistan	N.W.F.P.	Punjab	SINDH
				28 0	32 18	36 21	32 24
Mothers							
6-11 Healthy Child	TIPs	22	Rural 14	4	4	3	3
			Urban 8	0	2	4	2
12-24 Healthy Child	TIPs	20	Rural 16	5	3	4	4
			Urban 4	0	2	1	1
0-5 Child suffering from Diarrhea	TIPs	8	Rural 6	1	1	2	2
			Urban 2	0	1	0	1
6-24 Child suffering from Diarrhea	TIPs	14	Rural 10	1	3	2	4
			Urban 4	0	0	2	2
0-5 months Recovering Child	TIPs	11	Rural 9	1	4	2	2
			Urban 2	0	1	0	1
6-24 months Recovering Child	TIPs	16	Rural 12	1	3	5	3
			Urban 4	0	0	1	3
Family Members							
Father regarding Child's Health	IDIs	22	Rural 16	4	4	4	4
			Urban 6	0	2	2	2
Mother-in-law regarding Child's Health	IDIs	22	Rural 14	4	4	3	3
			Urban 8	0	2	3	3
Health Care Providers							
LHVs regarding Child's Health	IDIs	38	U / R 10	1	2	4	3
Doctors regarding Child's Health	IDIs		U / R 11	1	3	3	4
LHWs regarding Child's Health	IDIs		U / R 17	2	5	5	5
TBAs regarding Maternal & Child Health	IDIs	28	Rural 18	3	4	7	4
			Urban 10	0	3	3	4

The criteria for recruitment of the sample was as follows:

- Mothers with children 0-23 months (healthy children, children with diarrhea, children recovering from illness).
- Fathers with children 4-18 months old.
- Mothers-in-law with grand children 4-18 months old.
- Health care providers working in a community or a health facility. Teams were asked to recruit doctors/LHVs from both the private and the government sectors.
- LHVs trained at public health schools and working with complete explanation of how to use each question guide, as well as how to record responses and discuss TIPs 1/24-hour recalls.
- TBAs (30% trained and 70% untrained).

All respondents were asked if they would like to be interviewed. Research supervisors were responsible for seeing that the field coordinators had identified the correct respondents, according to the above criteria.

A purposive method of sampling was used. The sample included rural and urban communities in all four provinces, except that there was no urban sample from Balochistan. More than half the sample was from rural areas. The NGO supervisors were asked to choose communities and villages where they were not working. Recruitment was done a day earlier than the interview, by field coordinators. Recruitment for IDIs was done while the teams were doing the TIPs interviews.

The actual number of TIPs planned for the category of mothers whose children had diarrhea or were recovering from an illness could not be completed, because researchers had difficulty finding enough cases.

A separate observation sheet was developed on which interviewers could record information about hygiene and other practices that they observed during visits. A separate one-page questionnaire was used to ascertain the populations' preferences for electronic media and accessing information on maternal and child health. (See Annexes 10 and 11)

The three main components of the research were as follows:

Trials of Improved Practices (TIPs) with mothers. The targeted populations were:

- 6-11 month old healthy children
- 12-24 month old healthy children
- 0-5 month old children with diarrhea
- 6-24 month old children with diarrhea

0-5 month old children recovering from illness
6-24 month old children recovering from illness

In-depth Interviews with family members. The targeted populations were:

Fathers of children ages 4-18 months
Mothers-in-law with grandchildren ages 4-18 months

In-depth Interviews with health care providers. The targeted populations were:

Doctors/LHVs
LHWs
TBAs

The research targeted the mothers of children between 0 - 24 months, in the above categories, not only to understand their knowledge, beliefs, and practices, but also to gauge the potential for changing or modifying inappropriate infant and young child feeding practices.

Data Tabulation, Analysis, and Report Writing

During January to March, the research teams were trained to transcribe data from questionnaires onto summary forms (see Annex 6). A data analysis training workshop was then organized in Islamabad for 10 days (see Agenda, Annex 13).

The most crucial lessons for the NGO research teams were:

- TIPs is an excellent method for nutrition counseling. Practicing TIPs for them meant learning what women were thinking and feeling about their own health and pregnancies.
- They thought it was a method to train counselors in the skills of listening, probing, and negotiating.
- They said it promoted an attitude in health workers to learn from mothers and to establish empathy for their situations and constraints.
- They also said it promoted understanding of practical changes to recommend for feeding and home health practices. The overall consensus was that this process has been found to motivate health personnel to take a serious interest in learning appropriate ways to work with mothers and other caregivers to resolve feeding and health problems.

Participants were divided into working groups and were introduced to the process of analysis and synthesis of behavioral data, using the behavioral grids format.

The groups then organized the responses from the summary forms using colored highlighters (different colors for urban, rural, and inter-provincial) to make a visual presentation of data manually. The data was collated from all provinces onto one sheet for each question.

The groups also analyzed the data of the TIPs interviews 1, 2, and 3, looked at various feeding problems that were identified through the 24-hour recalls, and analyzed the summary recommendations to see which options mothers were willing to try and why.

When all the data were collated, the group did a combined exercise using one feeding problem that was identified for pregnant mothers. They determined from the data what was the current practice, what were the mothers' perceptions about the ideal behavior, and what were the benefits and drawbacks of the current practices. They also analyzed the data from the family and health care providers to see the positive and negative influences on mothers' current practices.

The summary sheets from the workshops were thus used to write the reports from interviews with mothers, family members, and health care providers. After the workshop, the core team and two assistants helped in data verification and validation, especially of the 24-hour recalls, and summary data of the trials.

The initial reports were prepared by the core team in Pakistan. Summary reports were put together and edited by Manoff consultants. Based on preliminary reports, Manoff consultant Ms. Judith Standley, in collaboration with the core team in Pakistan came up with a proposal for refining existing cards, designing new cards, and adding support materials.

B. Description of the Population

The research targeted mothers of children under two years of age. A total of 87 mothers were interviewed to learn about their knowledge, attitudes, and practices regarding young child nutrition and care. Sixty-seven of these mothers were from rural and twenty from urban areas. Their ages ranged from 15 to 40 years. The mothers from both urban and rural areas had from 1 to 10 live children. Although most of the women were illiterate, some could read and some had even attended a few years of school, while one was a school graduate. Fifty-five lived in extended families ranging from 6 to 14 members, and 32 lived in nuclear families with 2 to 8 members. The study also included the main "influencers" -- fathers, mothers-in-law, and health care providers.

All mothers were doing household chores, such as cooking, cleaning, and washing, but some were doing other work as well. Many mothers were additionally bringing fodder from the fields, cutting it for the cattle herd, milking the cattle, and making cow dung cakes. A few mothers were also stitching and sewing to generate income. Their husbands tended to be low-paid employees in public and private sectors, while some were self-employed as farmers or fishermen. One husband was a teacher in a primary school.

A total of 22 fathers were interviewed regarding the nutrition and care of their children under two years of age. Sixteen lived in rural areas and six in urban settings, and they ranged in age from 22 to 48 years. In general, they were low-paid private or public sector employees or low-income and self-employed. One was unemployed. The fathers tended to have much more education than the mothers, with 19 having attended from 4 to 12 years of schooling and only three unable to read at all. Sixteen fathers lived in extended-family settings, and six lived in nuclear families. They had from 1 to 10 living children, although nearly half reported having lost at least one child. (In one family, five children had died.)

Researchers interviewed 22 mothers-in-law (MILs) regarding the nutrition and care of their grandchildren under two years of age. Fourteen MILs lived in rural areas and eight in urban. They ranged in age from 45 to 70 years and had from 1 to 14 grandchildren each. The grandchildren were from 5 to 18 months of age.

Eleven doctors were interviewed regarding the nutrition and care of their patients under two years of age. Six of the doctors practiced in rural areas and five in urban settings. Of the eleven, seven were male and four were female, and they ranged in experience in their communities from six months to thirteen years.

Researchers interviewed ten lady health volunteers (LHVs) regarding the nutrition and care of their patients under two years of age. Nine worked in urban settings and one in a rural area. All ten were female, and their experience in their communities ranged from four months to fifteen years.

Seventeen lady health workers (LHWs) were interviewed regarding the nutrition and care of their patients under two years of age. Of these 17, 10 worked in rural areas and 7 in urban settings. Sixteen were female, and one, a medical technician, was male. Their experience in their communities ranged from one month to three years.

Twenty-eight dais were interviewed regarding the nutrition and care of their patients under two years of age. Of these 28, 22 had received professional training in maternal and child health (of from 2 weeks to 1 1/2 years duration) and six had not. Five of the six who were untrained were practicing in rural areas and one was in an urban area.

III. Current Health and Nutrition Situation of Infants and Young Children

Interviews with Mothers

Care and Feeding of Healthy Children (6-11 months)

Mothers' Background

Twenty-two mothers of healthy infants 6-11 months of age were interviewed to learn about their knowledge/attitudes/practices regarding infant care and nutrition. Fourteen of these mothers were from rural and eight from urban areas. The ages of these mothers ranged from 15 to 40 years. There were 11 children each in the age group 6-8 and 9-11 months. The mothers from urban areas had 4-7 and from rural areas 1-10 live children. Although most of them were illiterate, some could read and only one had attended a formal school. Fourteen lived in extended and six in nuclear families. The size of extended families ranged from 7 to 20 members and of nuclear families, from 5-8.

All mothers were doing such household chores as cooking, cleaning, and washing, but some were doing more work. Seven mothers in this group were additionally bringing fodder from the fields, cutting it for the cattle, milking the cattle, and making cow dung cakes. One mother over and above this was stitching and sewing to generate income. Husbands were low-paid employees in public and private sectors, self employed, or farmers. One husband was a teacher in a primary school.

Basic Information Regarding (6-11months) Healthy Child

Area	District	Community / Villages	Mother's Age	Mother's Occupation	Father's Occupation	Education		Family		Child Births			Youngest Child's Age
						Ability to Read	Schooling	Type	Members	Total	Living	Died	
Sindh													
Rural	Hyderabad	Zahar Pir	20	House-Wife	Govt. Servant (Policeman)	Little-Bit	5-yrs	Nuclear	6	4	4	0	8-months
Rural	Shikarpur	Qadir Buksh Lohaar	25	House-Wife	Teacher	None at all	N.A.	Extended	No Reply	3	3	0	6-months
Rural	Shikarpur	Wazirabad	30	House-Wife	Water-operator	None at all	N.A.	Nuclear	8	6	6	0	11-months
Urban	Maleer	Ibrahim Haidri	25	House-Wife	Fisherman	Little-Bit	5-yrs	Nuclear	5	3	3	0	11-months
Urban	South-KHI	Akhter Colony	32	House-Wife	Dispenser	Read Well	10-Yrs	Extended	10	7	7	0	6-months
N.W.F.P													
Rural	Charsada	Pala dharary	22	House-Wife	Govt. Servant (Policeman)	None at all	N.A.	Extended	20	3	3	0	9-months
Rural	Bannu	Hasne-kalan	22	House-Wife	Shopkeeper	None at all	N.A.	Extended	5	2	2	0	10-months
Rural	Abbotabad	Mian di Sahri	25	House-Wife	Driver	Little Bit	4-yrs	Extended	No Reply	2	2	0	6-months
Rural	Peshawar	Gara Tajak	24	House-Wife	Driver	Little Bit	5-yrs	Extended	10	2	2	0	10-months
Urban	Mardan	Ghulay Ghadar	23	House-Wife	Daily Wages	None at all	N.A.	Extended	8	3	3	0	7-months
Urban	Mardan	Peran-Ghalib Colony	37	House-Wife	Daily Wages	None at all	N.A.	Nuclear	7	5	5	0	9-months
Punjab													
Rural	Gujranwala	Kila Sundar Singh	25	Football Maker	Football Maker	Little Bit	3-yrs	Extended	No Reply	1	1	0	10-months
Rural	Sahiwal	61-5L	30	Harvester	Farmer	Little Bit	2-yrs	Nuclear	7	5	5	0	9-months
Rural	Kasur	Khara	30	House-Wife	Daily Wages	None at all	N.A.	Nuclear	6	5	4	1	10-months
Urban	Gujranwala	Naushera Road	26	House-Wife	Steel Welder	Little Bit	5-yrs	Extended	15	4	4	0	7-months
Urban	Rahim Yar Khan	Nawan Kot	30	House-Wife	Shop Keeper	None at all	N.A.	Extended	No Reply	6	6	0	8-months
Urban	Rahim Yar Khan	Nawan Kot	25	House-Wife	Farmer	None at all	N.A.	Nuclear	8	6	6	0	10-months
Urban	Lahore	Madina Colony	22	House-Wife	Driver	None at all	N.A.	Extended	8	3	3	0	6-months
Balochistan													
Rural	Qila Saifullah	Killi Orgas Pirzai	30	House-Wife	Teacher	Little Bit	2-yrs	Extended	No Reply	6	6	0	11-months
Rural	Lasbella	Dilfaroz Gadoor	25	House-Wife	Fisherman	None at all	N.A.	Extended	No Reply	2	2	0	8-months
Rural	Lasbella	Adam Bhutt	28	House-Wife	Daily Wages	None at all	N.A.	Extended	No Reply	1	1	0	8-months
Rural	Quetta	Nawa kalin	30	Embroidery	Govt. Servant	None at all	N.A.	Extended	No Reply	10	10	0	8-mo

Mothers' Workload and Care Practices

Five out of seven overworked mothers had at least one family member (MIL, SIL, or elder daughter) to share the workload. Six out of eight overworked mothers came from extended families. In the group of overworked mothers, 6 out of 7 did not have time for rest or recreation/socialization. One mother socialized when she visited a sick relative. Two of the mothers stated that meeting friends is not liked by in-laws. Most of them enjoyed their children while feeding them or while putting them to sleep or consoling them when they cried.

Out of 14 mothers with a lesser workload, 7 out of 14 had support for household work. Eight out of 14 came from extended families. Seven out of 14 in the group with lesser work had no time to take rest or to socialize. Six out of 14 had very little time to spent with children. A few amongst this group also enjoyed their children while feeding.

Health Status of Children

In healthy infants 6-11 months of age, 4 out of 22 were completely vaccinated according to the standards of the national EPI program. Five each were either unvaccinated or incompletely vaccinated, while in the case of eight infants, mothers could not recall the name or number of shots received by their children. Both unvaccinated and incompletely vaccinated children were from rural areas with the exception of one incompletely vaccinated child. One of the mothers said that she herself is vaccinated but not her child.

Diarrhea was rare (9), as were fever, coughs and colds. Two mothers of seven children with diarrhea "sometimes" told that the child gets diarrhea on cold days only. Acute respiratory infections were reported as occurring often by two mothers and "never" by six mothers.

CHILD FEEDING

Semi-solid Feeding

Ideal Practices

6-9 months

- Continue breastfeeding - at least eight times during day and night.
- Give the baby his/her own bowl so you can see how much is being eaten.
- Start giving soft, mashed foods like banana, potato, khichri with yogurt, firni, rusk soaked in milk.
- Begin with a small teaspoon; the baby should be eating two spoonfuls for each month of age ($\frac{1}{2}$ cup or $\frac{1}{2}$ pao by 9 months). Give the baby at least three semi-solid foods each day.

10-12 months

- Continue to breastfeed at least six times.
- Feed at least three semi-solid foods each day.

- In addition to three meals, give two snacks. Give steamed carrots, green leafy vegetables, soft cooked lentils.
- Give a teaspoon of extra ghee with semi-solid foods.

Actual Practices

Age at start of semisolids and the reasons for starting these

Most of the mothers (9/22) said they started semisolids between the ages of 4-6 months, although some did so between 7-8 months (5/22) and 9-10 months (3/22). The rest were given SS after the age of 10 months. Mothers who did not give semisolids did not give a good reason for this. Foods popular with mothers of infants 6-11 months were:

Fresh Milk in Bottle	7
Banana	6
Khichri/Rice	2
Cerelac/Farex	3
Egg	3
Kheer	2

The majority of mothers were feeding only token amounts of semi-solids. The reasons for giving semi-solids were as follows: "The baby was snatching food from his sibling, so I handed him a biscuit." Buffalo milk in a bottle was the most popular food, introduced because "my milk was not sufficient," or the woman's mother said: "otherwise he will not grow fat and beautiful." Banana and cerelac were the next most popular. No reason was given by mothers for introducing these. Khichri/rice were not often given to this age group, while egg was given either if it was a cold day or if the child had a running nose. The quantity given per serving was insufficient, and the frequency of giving semi-solid food was not mentioned by any mother.

Who feeds the child?

Fifteen mothers said "I do." The MIL or SIL did in four cases each. This was mostly when mother was busy doing some other work, and the child started crying. Two husbands also helped busy mothers by bottle-feeding the child.

Maternal criteria for normal growth of children

Most of the responses pointed toward growth as a good indicator. The child was either weighed, or the clothes were getting shorter and tighter, or the legs and arms looked rounded and full, or the child was heavy to carry in arms of mothers or looked fat. Half of the responses were related to milestones of development. The child generally looked "good and fresh" was the response of 3 mothers. The most common indicators given by mothers were "that the child does not cry" (7 mothers), was "very playful" (5 mothers), "looks healthy" (5 mothers).

Two mothers who felt that their children were not growing well stated that "the child is weak" or does not want to eat anything.

Beliefs

Maternal opinions regarding the quantity of food consumed by the child

Ten of 22 mothers were satisfied with quantity of food they gave to their children, while 9/22 were not. The remaining 3 children were not yet taking anything besides mother's milk. Those who said yes gave the following reasons: "whatever I feed the child is enough and correct (5), since the child does not cry, is healthy, does not fall sick, so he is getting enough" (4). One mother gave three helpings (without indicating the size of the helpings), and another one said that when the "child is satisfied as he refuses to take more." All the responses were very general, without specifying the quantity and frequency of feeding. Mothers who said they were not satisfied with what the child was eating argued that whatever they offer, the child does not take (3), or that the mother wants to give more food but is scared of diarrhea or indigestion (2). They also said:

- "My FIL does not agree with what I want to feed the child."
- "The father purchased this food, which I liked to feed my child."
- "I want to give cerelac but the child does not like sweet things."
- "The child can eat only as much as he can, I can't force him."
- "The child is too young for more food."
- "What is the use if I spend lot of time making a food and the child does not eat it?"
- "I wish I had money to buy cerelac and farex, but what can I do? I myself live off my parents."

It appears from these arguments that these mothers do not understand the requirements of a growing child, and their scant knowledge is reflected in their practices.

Was the child taking a variety of foods?

Eight of 22 believed they were giving a variety of foods to their children. In reality, these mothers were giving multiple cereals, e.g., khichri, kheer, dalia, cerelac, farex, roti and potato. The combination varied with each mother. One mother even gave cake. One could stretch a little bit and say that some of these cereal mixes had added milk or ghee, which are good sources of vitamin A. Two mothers wished they gave meat broth or meat gravy, but not meat itself, which is a good source of iron. In the vegetable and fruit group, bananas were given by 6 mothers and citrus by only one mother. The only vegetable was mentioned by any mother was potato; hence there was hardly any source of vitamin C in the food. Some unfulfilled wishes of mothers including the following: one mother wanted to feed buffalo milk packed in a tin to her child, as all commercial brands were of secondary quality; another who wanted to feed her child apple was sorry that her child could not eat it as he had no teeth; while a third wanted to feed banana milk shakes but "alas, it was 'badi'."

If the mother was not satisfied with food consumed, what else would she like to add?

This question was probably not well understood by mothers, as there was no response from 7 of 22 mothers. Two said they were already giving everything possible, while the rest (13/22) wanted to give "cerelac, khichri, egg, banana," the usual stuff, as soon as teeth erupted or as soon as the child was 9 months. Again, vitamin A, vitamin C and iron sources were not mentioned. There was just one mother who wanted to give her child liver, but she was advised by the village doctor to make such decisions after looking at the family budget. The expressed

reasons for any change in diet were mostly to make the child grow and meet his nutritional requirements.

24-hour recall

Mothers were asked if the food stated in the 24-hour recall was the same as routinely consumed by the child. Nineteen of 22 mothers said 'yes,' this is what the child takes normally, while three said no. The reason advanced by mothers who said no was that the mothers gave semi-solids occasionally. One mother said it was lack of money.

Food served to the family but not the child

The majority of the mothers reported withholding from children foods that were served to the rest of the family. These foods included vegetables like brinjal, squash, cauliflower, spinach, ladyfinger and potato. The fear was that those bring "badi" and garam, leading to diarrhea or sore mouth. Lentils like "masoor" and gram daal were not given for the same reason, with additional fear that these would produce "gas." Wheat or corn roti and vermicelli were hard to digest in the opinion of 6 mothers. Lassi was "cold" and could cause bad chest. Meat curry was difficult for a child to digest. Biscuits were not good, because would stick in the stomach.

Food taboos

A majority of the mothers mentioned vegetables as source of diarrhea and colic in the child. They also mentioned "ladyfinger" (2) for being badi or caused diarrhea, "carrot" (3) for being cold and capable of making the child sick, particularly in the chest. Citrus fruit and grapes were bad for the throat and worse still for the chest. Banana if given in small quantities was believed to cause constipation, and, if given in large quantities, diarrhea. Roti could cause choking in small children and rice lead to distention, being "badi."

Meat was mentioned by 5 mothers as heavy and harmful, and lentils were hot and "badi." Less commonly fed foods which could give problems, according to the mothers, were kachaloo, spicy food, egg, buffalo colostrum and biscuits. Mothers were warned of this by their mothers (7), MILs (6), neighbors (5), their own experience (5). No one mentioned mass media (the source of information for the 5 mothers who wanted to add feeding cerelac/farex). It would be interesting to discover.

What does the mother do if child refuses to eat?

Sixteen of 22 mothers said they just leave the matter, three try again after a while, a few offer alternative food and only two said they would force-feed. Only two mothers said they would play and gently coax the child to take food. Those who tried again after a while gave something else or used love and gentle coaxing, and they said these approaches worked. Some mothers did not respond to this question. A few said force-feeding makes the child sick/stubborn.

BREASTFEEDING PRACTICES

Was the child currently breastfed?

Twenty of 22 mothers gave a positive response, yes they were breastfeeding, because mother's milk gives energy (5), saves from diseases (6), development is better (2), it is less expensive (2), satisfies the child (1) easy to digest (1) easy to feed (1) and is always fresh (1).

Do the mothers have enough milk?

The answer to this question was equally distributed among those who said yes, they have enough, and those who said no. The latter group was supported in their belief because child kept crying, was getting weak, was not playing, and took a bottle eagerly. Mothers who thought they had enough supported their statement by saying that the child was satisfied, playful, slept well, did not cry and that they had a feeling of enough milk in their breasts.

For how long did the mothers intend to breastfeed?

6-9 months age group:

These mothers intended to continue breastfeeding for two years (3), three years (1), 2 1/2 years (1), 18 months (1). One mother with an 8-month old child said she would continue to breastfeed for another 3-4 months. *These mothers said this was a religious issue.* They were advised by elders, or the MILs, and the fear that they could become pregnant if they stopped breastfeeding. One mother expressed gender preference for duration of breastfeeding.

10-11 months age group

All said they would continue breastfeeding for two years, for religious reasons, as well as because they were advised by elders in the family or that every mother should do so.

Bottle-feeding

Is the mother bottle-feeding the child?

Nine of 22 said they were bottle-feeding, four of them beginning in the first two months and the others between 5 and 9 months. The justifications for their action were "it is sometime embarrassing to breastfeed"; "I am not sure if the child has taken enough breast milk, so I always bottle-feed the child"; or that "the child sleeps well during the night if bottle-fed before sleeptime"; and "sometimes one has to go out"; or that "the child would have died otherwise." The mothers were guided by their mothers, MILs/SILs or decided themselves to bottle feed.

Was a bottle used to feed other drinks?

Yes, it was by two mothers who gave "missri" in milk or water.

What type of milk was preferred for bottle-feeding?

Most often it was fresh buffalo milk, because it was "the most easily available type", and sometimes cow's milk because it is "light and does not upset the stomach." One mother was using lactose-free formula on the advice of the doctor. The preference for milk type was mostly a personal decision (7), but sometimes was influenced by advice from close relatives.

Who bottle-feeds the child?

Most often the mother herself and sometimes the MIL or SIL bottle-feeds the child. Two children were bottle-fed by their fathers, at times.

MAJOR ISSUES AND RECOMMENDATIONS

The majority of mothers were still breastfeeding (20/22). Many wanted to continue breastfeeding for 2 years. The majority of infants started complementary feeding between 4 and 8 months, the most popular food being milk in a bottle. Only three of 22 infants were taking inadequate calories. MILs feel diet is important to keep children healthy. Semi-solid food given included banana, khichri, egg, kheer, cerelac. Oil intake was less and no source of iron and vitamin A or C.

Advice to mothers

As the child is fast growing at this age and needs to stay healthy, bottle feeding can cause diarrhea, mothers should hence continue breastfeeding frequently, at least 8 times during day and night. Soft complementary foods like banana, boiled and mashed potatoes, Khichri with yogurt, kheer, firni and rusk soaked in milk may be given. Also, adding a teaspoon of cooking oil to each semi-solid feed is recommended. Begin with a small teaspoon of food; the baby should be eating 2 spoonfuls for each month of age ($\frac{1}{2}$ pao = $\frac{1}{2}$ cup by 9 months). The baby should take semi-solids three times a day. When the baby reaches 9 months of age, start giving small snacks between meals(at least two a day), as the breastfeeding may now be 6 times or so a day at this age. Green leafy vegetables, carrots and some seasonal fruit are strongly recommended. Once or twice a week well-cooked shredded meat may also be given.

Recommendations

- Support mothers' breastfeeding for two years
- Discourage bottle-feeding
- Promote exclusive breastfeeding for first six months
- Promote specific amounts of semi-solid foods and recommended schedule for giving them according to child's age
- Promote dietary diversification for young children
- Promote adding one teaspoon oil to food of young child

HEALTHY CHILDREN 12-24 MONTHS

Mothers' Background

Twenty mothers of healthy infants 12-23 months of age were interviewed to explore their infant feeding practices. Sixteen of the mothers were from rural and 4 from urban areas. They were equally distributed for nuclear or extended family systems, irrespective of their area of origin. The mothers in this group bore between 1-10 children each.

The age of these mothers ranged between 15-40 years. Twelve of them were illiterate, 7 had spent 3-10 years of schooling and one could read only. All were housewives, although 3 added to household income through additional work (two as seamstresses and one stitched footballs). Five of the mothers worked in the fields, brought fodder, milked and cared for the cattle. They also fetched water from the village well.

Five of the husbands were low-paid employees in the public or private sector, while 15 were farmers, labors, drivers, fishermen, etc. One of the fathers was a teacher.

Basic Information Regarding (12-24months) Healthy Child

Area	District	Community / Villages	Mother's Age	Mother's Occupation	Father's Occupation	Education		Family		Child Births			Youngest Child's Age
						Ability to Read	Schooling	Type	Members	Total	Living	Died	
Sindh													
Rural	Hyderabad	Hala-New	32	Ralli work	Farmer	None at all	N.A.	Nuclear	6	5	4	1	14-months
Rural	Shikarpur	Wazirabad	35	House-Wife	Dispenser	Little Bit	5-yrs	Extended	9	3	3	0	23-months
Rural	Shikarpur	Qadir Buksh	33	House-Wife	No reply	None at all	N.A.	Nuclear	8	6	6	0	18-months
Rural	No Reply	Gul Mohd. Ghabair	26	House-Wife	Farmer	None at all	N.A.	Extended	9	1	1	0	15-months
Urban	South-KHI	No Reply	40	House-Wife	Loader in ship	None at all	N.A.	Extended	16	10	7	3	16-months
N.W.F.P													
Rural	Abbotabad	Mian-di-Sahri	35	House-Wife	Driver	None at all	N.A.	Nuclear	6	4	4	0	12-months
Rural	Bannu	Hasne-Kalan	30	House-Wife	Daily Wages	None at all	N.A.	Extended	5	2	2	0	20-months
Rural	Charsada	Pala Dharay	38	House-Wife	Daily Wages	None at all	N.A.	Nuclear	10	8	8	0	23-months
Urban	Mardan	Ghullay Ghudar	22	House-Wife	Daily Wages	None at all	N.A.	Nuclear	6	4	4	0	20-months
Urban		Taqal Payan	30	House-Wife	Accountant	Read Well	10-yrs	Extended	6	2	2	0	18-months
Punjab													
Rural	No Reply	Dhaki Jehaz Wali	60	Football Maker	Mason	None at all	N.A.	Nuclear	13	11	9	2	12-months
Rural	Sahiwal	61-5L	25	Harvester	Teacher	None at all	N.A.	Nuclear	4	2	2	0	22-months
Rural	Rahim-Yar-Khan	Nawan Kot	28	House-Wife	Shopkeeper	None at all	N.A.	Extended	12	1	1	0	12-months
Rural	Sahiwal	61-5L	18	House-Wife	Shopkeeper	None at all	N.A.	Nuclear	3	1	1	0	18-months
Urban	Lahore	Madina Colony	28	House-Wife	Electrician	Read Well	10-yrs	Extended	8	3	3	0	18-months
Balochistan													
Rural		Orgass	24	House-Wife	DSP	Little Bit	4-yrs	Extended	8	3	3	0	16-months
Rural	Lasbella	Allah Nova Gadoor	20	House-Wife	Fisherman	None at all	N.A.	Nuclear	4	2	2	0	18-months
Rural	Lasbella	Adam Bhutt	28	House-Wife	Driver	None at all	N.A.	Extended	13	3	3	0	20-months
Rural	No Reply	Kali Bangalzai	30	House-Wife	Farmer	Little Bit	4-yrs	Extended	16	5	5	0	19-months
Rural	No Reply	Sabz Alizai	35	House-Wife	Govt. Servant	None at all	N.A.	Nuclear	11	9	9	0	18-months

Mothers' workload and care practices

In this group, 7 out of 20 mothers were over-worked, in the sense that besides household chores they tended to the cattle herd, worked in the fields or stitched/sewed as well. Four of seven had in-laws or daughters to share the workload (a husband in one case), 5/7 did not get time to take a rest (rest was only during night), play with children or socialize. Thirteen out of 20 had a moderate workload, and half of these had MILs/SILs/daughter to share the workload. All but 2 had time to take a rest, play with children (hold, sing lullabies and make dolls for them) as well as socialize. Two mothers could not socialize, because this was not acceptable in the family "Rewaj nahe." Over-worked women had less time for themselves and for their children than mothers with moderate workload. Support to share the work was more or less the same for women in both groups.

HEALTH STATUS OF CHILDREN

Nearly half of the mothers (10) got their infants fully vaccinated and kept the vaccination card, whereas 5 were incompletely covered, 2 were unvaccinated because of lack of access to a health facility and for the rest because information was incomplete, because the mothers could not recall when, what, and how many shots the infants had received.

When asked about the kind and frequency of illness in their infants mothers, gave the following information regarding illness episodes: diarrhea, 16 episodes; acute respiratory infection, 3; colds/cough, 5; and fever, 8. The difference in the frequency of illness was not significant between the urban and rural areas.

CHILD FEEDING

Semi-solid Feeding

Ideal Practices

- Continue breastfeeding
- Introduce soft food by 6th month
- Start with soft food or mashed bananas, potatoes
- Soft food can be drawn from family foods, like khichri with yogurt, choori, kheer, daal, mashed bananas/potato mixed with yogurt
- Begin with 1 small teaspoon and build up to 2 teaspoons (of any soft food) for each month of age
- Give at least 3-4 semi-solid foods

Actual Feeding Practices

Age at start and preference for first semi-solid food?

Seven out of 20 mothers introduced semi-solid food at 4- to 6 months. Another 7 did at 7 months and 4 between 8 and 12 months. At one year of age, two infants were not yet on semi-solids. Mother's preference for semisolids was as follows:

Banana 6

Kitrchri	6
Cerelac/Farex	2
Roti	6
Egg	1
Halwa	1
Kheer/firni	2
Vermicelli	3
Vegetable	1
Yogurt	1

Roti was preferred by the age of one year. Yogurt was given to only one infant (rural Punjab). It should be noted that yogurt is less popular during winter-time, when this study was conducted. The reasons advanced by mothers for introducing semi-solid food can be summarized as follows:

- Milk was not enough for the child to grow and develop -- 15
- Because of next pregnancy -- 2
- So that child could get used to solid food -- 2
- Long out-door hours in the fields, so mother started having the child be given semi-solid food to keep him satisfied till she came back -- 1

Who feeds the child?

In the vast majority of cases, it was the mother herself. Sometimes it was the elder daughter or SIL. Rarely was it the husband, MIL, or FIL who fed the child.

Is this the child's routine food?

After the 24-hour recall, when mothers were asked if this was the typical/usual food given to the child, 18 of 20 said yes. Among those who said no, the food not mentioned in recall for previous 24 hours were the usual semi-solids.

Is there food consumed by family members which is not given to the child?

Yes, such vegetables as carrots, cauliflower, spinach, and lady fingers were eaten by the family and not given to children, because these can cause indigestion. Apples/oranges/cold drinks can lead to bad chest. Daal cannot be digested by young children, tea can cause diarrhea, as does spicy food, while egg is hot ('Garam').

Maternal criteria for normal growth of children?

Sixteen out of 20 mothers thought their children were growing well, while four considered that their children were not growing well. Mothers who thought a child was growing well used the following indicators to support their statement:

- Developmental milestones 17
- Growth 7
- Clothes getting tight and short 1
- Does not fall sick often 3

- The bowel opens regularly 2

The responses of mothers not satisfied with the growth were:

- Has poor appetite 1
- Falls sick so often 1
- Lazy 1
- Weak 3
- Not growing with age 1

The responses were often multiple.

Is the child taking as much food as the mother would like?

Twelve out of 20 mothers were happy and satisfied, because they thought the child ate what was offered and as much as was offered. However none of the mothers gave any measure of how much their children eat. Mothers who were dissatisfied on this account thought the other way round. They provided the following reasons:

- The child leaves the food unfinished, has no appetite.
- I am poor; I can't afford bananas, apple, fruit, and meat for my child.
- One urban mother wanted her child to take a whole egg, ¼ roti, full feeding bottle etc. -- of course one at a time, but the child did not oblige the mother.
- The child should feel happy when fed, and should not keep moaning. "I offer egg, khichri, fruit and vegetable, but my child does not take anything."

Does the mother think that the child is getting a variety of foods?

Fifteen out of 20 mothers said yes, while 5 said no. The reasons advanced were almost the same as given above. This question probably needed further probing.

Would the mother like to give other foods?

Yes, said the mothers. They would like to give whatever was cooked for the family, and also fruit, chicken, egg and meat, roti, rice, potato, farex, biscuit, suji ki kheer, and sweet meat that the husband brings. Their major interest in wanting to give all this was better growth (6), enhanced development (6), and freedom from diseases (3).

What foods do mothers consider harmful for children and why?

- Vegetables - cauliflower, brinjal, spinach, potato
- Fruit - bananas, oranges, apples, watermelon
- Yogurt
- Meat
- Masoor ki dal, gram daal, gram
- Commercial formula and farex
- Ice cream, "sour" and "cold" things, 'paparr'
- Toffees, etc
- Buffalo milk

Vegetables are "badi" and "garam" and can make the child sick. Fruit is "cold" and will cause cold and cough and a bad chest, while banana can cause diarrhea. Yogurt is bad for the chest, "thanda he". Lentils are "garam" and "badi" and difficult to digest. Meat is difficult to digest, and commercial formula and farex can give "bad stomach." Ice cream, sour and "cold" food can cause cold or even fever with "bad chest." Buffalo milk can lead to distention.

Who advised the mother in this regard?

Most often, it was mother's mother, followed by MIL. Less often it was the husband, neighbors and SIL. Only once was it a TV program.

What do the mothers do if the child refuses to eat?

Some mothers (6) used scolding, anger, and force-feeding; some left the child for the time being and offered food after a while; while some gave alternative food (e.g., biscuits), offered breastmilk or bottle-feeding; or put the child to sleep. All these maneuvers worked with very few exceptions.

Does the child self-feed?

The majority of mothers said yes (16). Some mothers with children 12-15 months said no (4), the child is too small to feed him/herself yet.

Does the child take food with the rest of the family?

Twelve mothers said yes, the child enjoys eating with family or copies others, or when the family sits for food the child automatically crawls or walks up to them, and also this creates a good habit of sitting together as a family. Eight mothers said no, this "spoils the child", "asks for food in front of guests," or "does not come near when my husband is taking food." "I feed him before serving food to the family, otherwise he becomes a bother." "I don't feed the child in front of others for fear of 'nazar', or "the child creates a mess." "Eating in the same plate can transmit contagious diseases, I have told my husband."

Otherwise, what is the right age when a child should eat with the family?

Some of the mothers said at 3, 5, or 7 years of age, or between 15-24 months. One mother said when the child learns to walk.

Is the child served in his/her plate or bowl?

The response was equally divided between yes and no.

Why?

"Because elders smoke cigarettes, the child should never be served in the same plate" (1); if special plate or bowl is used, then the "mother can make a better guess of the amount consumed" (3); "children feel happy to take food from their own plate" and that "mothers liked it this way" (2). Those who said "no" did not give a reason, except one mother said "the whole family eats from the same plate...we don't have a lot of utensils."

At what age does the mother think that her child can hold the bowl to drink?

There were few responses to this question. The right age according to the few mothers who

responded was 16-24 months.

BREASTFEEDING

Is the mother currently breastfeeding?

Thirteen out of 20 mothers were breastfeeding currently. While 6 of these gave no reason for doing so, the rest thought it was good for the health of the child (4), easy to feed (1), or saved the child from infections.

How many times in a day were these mothers breastfeeding the child?

The responses were from "on demand" (1) to 4-5 (3), 8-10 (11) times and just once a day (3).

How long was the suckling time?

Although the majority made no statement, 2 said it was for 10 minutes, and 3 said it was for 5-10 minutes (3) each time. Four mothers thought they were producing enough to meet the requirements of the child. Those who thought they were not producing enough, advanced these reasons:

"If I eat fruit, egg, meat, and milk, only then can I produce enough."

"It is not possible to feed breastmilk if your are pregnant."

"I don't produce enough. I got medicine from the doctor to increase the quantity of milk, it has not worked."

"It hurts."

"I myself am weak, how can I feed the child?" and the usual "not enough milk."

How long would the mother continue breastfeeding?

The responses were as follows:

2 years (7)

3 years (1)

20 months (2)

Till next pregnancy (2)

For another month (1)

The reasons given were: this is according to "Islamic laws," "it is the right of the child", "elders' advice," "good for the health of the child," and "child will have strong bones."

Bottle-Feeding

Is the child currently bottle-fed? When was it introduced and why?

Seven out of 20 children were taking bottle-feeds. Bottle-feeding was introduced within a month for 6 children and at 11 months for one child. The reasons advanced by the mothers were follows:

- "You can actually watch how much the child takes." (2)

- “The child was admitted in a hospital during sickness the nurses started giving him a bottle.” (1)
- “I don’t have time; I have a lot of work to do; someone else can feed with a bottle while I am busy.” (2)
- “If you give a bottle at night, the child sleeps well.” (1)
- “Next pregnancy.” (1)
- “I had joint pains and was advised by the doctor to switch from breast to bottle-feeding for the child.” (1)

The mothers received advice for bottle-feeding from MILs, elders in the family, doctors, or it was a decision made by the mother herself.

MAJOR ISSUES AND RECOMMENDATIONS

The majority of the mothers were still breastfeeding. One-third of the children were bottle-fed. Some children were still not taking semi-solid food at this age. Also, the quantity of food intake and frequency of feeding were less than desired; still, most mothers felt that child’s intake was satisfactory. In 24-hour recall, the variety in food was limited. However, most mothers said if they had resources, they would give better food like fruit, chicken, egg, meat roti, farex, biscuit suji ki kheer, and sweet meats. This shows a positive link between food and health. Also, certain foods considered harmful (meat, fruit, egg, chicken) may not be strong barriers. Mothers, however, considered their children were growing without getting the weight monitored, and the children may in fact be faltering in their growth.

The child at this stage should be taking family food. Give at least 3 meals and 2 snacks. For each meal, give a pao (one cup) of food. For each snack, the child needs a piece of fruit, or roti with ghee or a small portion of firni, yogurt with or without boiled vegetable, boiled mashed potato with a little cream. Continue to breastfeed for at least two years, three times in a 24 hours. If you have stopped breast feeding, give milk with a cup, not a bottle.

Recommendations:

- Support breastfeeding for two years
- Discourage bottle-feeding
- Promote specific amounts of semi-solid foods and a recommended schedule according to child’s age
- Promote dietary diversification for young children

FEEDING DURING DIARRHEA

0-5 MONTHS

Mothers' Background

Eight mothers of infants 0-5 months of age (2 urban, 6 rural) were interviewed to explore the feeding practices during acute illness. These mothers were 22 to 35 years old. All tended to household chores. One rural mother added to the family income by additional work of sewing and stitching. All husbands were labor, farmer or fisherman, except one who was employed. Three of the mothers were illiterate, while four had few years of schooling, and one mother was matriculate. Two mothers belonged to nuclear and six to extended families. The mothers from urban areas had 3-6 live children and those in the rural area had one to eight.

Six of the mothers were overworked -- working in the fields with men or caring for the cattle herd but had support from MILs/SILs or elder daughters. These overworked mothers had no time to take rest except one mother who could take rest for 15-20 minutes in the afternoon. She was the only one also who had some time to socialize with friends or relatives. The other five overworked mothers had no time for this activity. This group spent time with children while feeding them or putting them to sleep. Two mothers out of eight had moderate workloads, and one of them had time to play with children, socialize, and take rest, while the others did not have the leisure of taking rest but had time for children, friends, and relatives.

Basic Information Regarding (0-5months) Child Suffering from Diarrhea

Area	District	Community / Villages	Mother's Age	Mother's Occupation	Father's Occupation	Education		Family		Child Births			Youngest Child's Age
						Ability to Read	Schooling	Type	Members	Total	Living	Died	
Sindh													
Rural	Hyderabad	Wasi Murad Shahid	20	Sewing	Farmer	None at all	N.A.	Extended	7	3	3	0	5-mont
Rural	Maleer	Ibrahim haidri	35	House-Wife	Fisherman	None at all	N.A.	Nuclear	10	8	8	0	5-months
Urban	South-KHI	Akhter Colony	22	House-Wife	Security Guard	Read Well	10-yrs	Nuclear	5	3	3	0	4-months
N.W.F.P													
Rural	Charsada	Pala Dharay	32	House-Wife	Land Lord	Little Bit	3-yrs	Extended	15	4	4	0	4-months
Urban	Mardan	Khan Kotay	32	House-Wife	Daily Wages	None at all	N.A.	Extended	10	6	6	0	4-months
Punjab													
Rural	Gujranwala	Kot Sheran	25	House-Wife	Farmer	Read Well	6-yrs	Nuclear	7	5	5	0	5-months
Rural	Lahore	Phangall	21	House-Wife	Factory Worker	Read Well	12-yrs	Extended	5	1	1	0	4-months
Balochistan													
Rural		Kalli Bangalzai	28	Embroidary	Driver	None at all	N.A.	Extended	No Reply	4	4	0	4-months

HEALTH AND CARE PRACTICES

The children in this group had an age range of 3½ to 5 months. By this time they should have received BCG and 3 doses of DPT and polio, according to the national EPI schedule. All children were vaccinated with BCG; however, only one out of 8 children had received two doses of DPT and polio, and the other 7 had received only one dose. Although the majority lived in rural areas, they had had at least two contacts with EPI staff.

Health status

Mothers were questioned about the number of times the child was sick with an acute illness. All five mothers who said the child rarely got diarrhea were exclusively breastfeeding their infants. Two children who "often" had diarrhea were totally bottle-fed, while one who "sometimes" had diarrhea was both on bottle and breast.

Type of diarrhea

One of 8 young infants had associated fever, while 5 of 8 had vomiting as well. Watery diarrhea was reported in 3, while in the rest it was frequent, loose, offensive stools.

Mothers' perceived causes of diarrhea

Three of 8 mothers attributed diarrhea to food consumed by her, one to cold, one to fallen fontanel, yet another to dirty bottles, and the rest did not know.

Whom does a mother consult?

Half of mothers of babies 0 to 5 months said that they would consult a doctor to get medicines or injections to stop diarrhea. One of the mothers from NWFP used poppy flower extract to stop diarrhea. A Balochi mother gave urq-shirin as a home remedy. Three of 8 mothers of young infants said they gave ORS or SSS to the child.

Concerns about diarrhea being dangerous

Six of 8 mothers of these infants were concerned about loose motions, while the concern of one woman was that she had to wash soiled nappies so often in winter. Vomiting was the concern of five mothers, and weakness for another three. Death was a danger for three mothers. The majority of the mothers expressed their concern about the weak health of infants. The mother of a rural child from Punjab appeared to consider as diarrhea the soft, frequent stools (4-5 per day) due to breastfeeding. This mother reported that her child was very active, slept well, and had good appetite.

Was diarrhea ever dangerous?

Mothers considered diarrhea dangerous if it did not improve with medication or if the infant looked lethargic and lazy. It was also considered dangerous if there was associated respiratory infection, or incessant vomiting. No mother mentioned dehydration as dangerous. Only one recognized signs of dehydration (sunken eyes), yet a few were giving SSS or ORS.

FEEDING PRACTICES DURING DIARRHEA

Breastfeeding

Has the mother continued breastfeeding?

Five of 8 mothers were exclusively breastfeeding, two gave both breastmilk and a bottle, while one just bottle-fed. Within the exclusively breastfed group, three mothers had started additional foods like egg, water, qaawa, and urqe-shirin during diarrhea.

Some mothers of infants that nursed less frequently stated:

“I suckle the child less frequently. If it suckles more often, the diarrhea will get worse.”

“I am worried, as there is no milk in my breast, what will the child take” (urban).

“I want to feed him, but he has no appetite” (rural).

“The child is sick so medicines are more important than breast milk. I focus on medicine so that child gets better” (rural).

In the age group 0-5 months, one mother tried all types of commercial and fresh milk before coming to the conclusion that buffalo milk suited her child best. Another two mothers believed that both bottle and breast keep the child satisfied and healthy, and both introduced bottle at the age of one month. Yet another gave tea, saying, “what can a poor mother offer in a bottle but tea?” Only one mother gave additional water.

Complementary Feeding

Maternal perceptions

When to start what?

Opinions varied and were evenly distributed over 4 to 12 months. As to the right age for starting semi-solids, four mothers believed that 4 to 6 months was the proper age since breastmilk is no longer enough for the growing needs of the infants. Those who believed in starting from 9 to 12 months believed that this is time when infants should get used to the food that they will eat when they grow up.

Food that should be given

The majority of the mothers believed that banana was a good food during diarrhea, as it helped in reducing the number of diarrhea stools. Khichri was considered good for the same reason by a smaller number of mothers. Tea was preferred by two mothers, as it helped in stopping diarrhea.

Food that should be avoided

Buffalo milk was heavy and should not be given during diarrhea, and yogurt and citrus were bad for the chest of the child. What mothers should avoid included spinach, daal (masoor and gram). Some mothers thought that they themselves should take light meals like khichri and

avoid roti and curry as well as hot food like egg, meat, and fish. Badi food could cause distention in the baby and mother should not take these.

After the 24-hour recalls

Mothers of infants who had diarrhea and said this was not a typical meal. The mothers also occasionally gave qaawa (1) and rice (1).

MAJOR ISSUES AND RECOMMENDATIONS

Most mothers continue breastfeeding during illness. Nearly half of the mothers were breastfeeding exclusively. Half the mothers increased frequency of breastfeeding during diarrhea. Mothers were not clear about the link between mixed feeding and diarrhea. Mothers were concerned about the illness of the child. Some mothers perceive bottle-feeding as convenient.

Mothers should know that increasing their food intake will lead to more milk production and better energy supply to the infant. Mothers should eat three meals and take two snacks to increase their food intake, and drink more milk and lassi. They should take iron folic acid tablets. Mothers should breastfeed 8 times during the day and 3 to 4 times during the night. If bottle-feeding, they should move to a cup and tea spoon. They should get children immunized according to the EPI schedule.

CHILD SUFFERING FROM DIARRHEA, 6-23 Months of Age

Mother's Background

Fourteen mothers (10 rural, 4 urban) of infants 6-23 months of age were interviewed to explore feeding patterns during illness for this age group. Maternal age of these children ranged from 22 to 40 years. Besides being housewives, three were self-employed, and one was a teacher in a school as well (Sindh, urban). Only one urban mother was a graduate, five had 3 to 7 years of schooling, three could read and two were illiterate. Four of 14 were overworked in the sense that besides household work they brought fodder from field, cut it, fed the cattle, milked them, and took care of their refuse. One mother even fetched water for the household (NWFP, rural). Two of 4 overworked mothers had someone to share their workload, while none of the 9 with less workload had anyone to help them. MILs and SILs commonly shared the workload, sometimes the elder daughter, and in one case the husband helped the wife. Eleven of 14 mothers had time to play and interact with infants. Most of them got time to play and take rest while putting their babies to sleep. Eight of 14 could socialize for 1-5 hours per day, and the rest had no time for friends and relatives. One could get time to take rest. Most husbands were earning little cash as laborers or low-paid employees, and two were unemployed.

Basic Information Regarding (6-24months) Child Suffering from Diarrhea

Area	District	Community/ Villages	Mother's Age	Mother's Occupation	Father's Occupation	Education		Family		Child Births			Youngest Child's Age
						Ability to Read	Schooling	Type	Members	Total	Living	Died	
Sindh													
Rural	Shikarpur	Wazirabad	25	House-Wife	Contractor	None at all	N.A.	Extended	11	3	3	0	12-months
Rural	Shikarpur	Wazirabad	25	House-Wife	Shopkeeper	None at all	N.A.	Extended	10	6	5	1	6-months
Rural	Hyderabad	Gul Mohammed	30	Embroidary	Farmer	None at all	N.A.	Nuclear	8	11	6	5	13-months
Rural	Maleer	Ibrahim haidri	22	House-Wife	Fisherman	None at all	N.A.	Nuclear	3	1	1	0	9-months
Urban	South-KHI	Akhter Colony	32	House-Wife	Navy	Read Well	8-yrs	Nuclear	8	6	6	0	9-months
Urban	South-KHI	Akhter Colony	25	Teacher	Army	Read Well	14-yrs	Extended	7	2	2	0	23-months
NWFP													
Rural	Bannu	Hasne Kalan	35	House-Wife	Daily Wages	None at all	N.A.	Nuclear	7	5	5	0	7-months
Rural	Mardan	Ajara Kalay	20	House-Wife	Workshop	None at all	N.A.	Extended	5	1	1	0	23-months
Rural	Peshawar	Koochian	26	House-Wife	Govt. Servant	None at all	N.A.	Extended	9	4	4	0	10-months
Punjab													
Rural	Gujranwala	Palke Dhakay	30	House-Wife	Job Less	Little Bit	No reply	Extended	10	4	4	0	15-months
Rural	Rahim Yar Khan	Nawa Kot	40	House-Wife	Butcher	None at all	N.A.	Nuclear	11	9	9	0	8-months
Urban	Gujranwala	Momanabad	22	House-Wife	Butcher	Read Well	10-yrs	Nuclear	7	4	4	0	15-months
Urban	Lahore	Walton Road	26	Embroidary	Sewing Machines	Read Well	10-yrs	Nuclear	5	3	3	0	5-months
Balochistan													
Rural	Quetta	Killi Bangalzai	25	House-Wife	Govt. Servant	None at all	N.A.	Extended	12	2	2	0	18-months

Health and care practices

The age range of children was as follows:

6-8 mo.	-	3
9-11 mo.	-	4
12-17 mo.	-	5
18-22 mo.	-	2

Immunization

Six of 14 had received BCG as well as 3 doses of DPT and polio vaccine; however only one of these 6 had received measles vaccine and four of the infants had undetermined vaccination status. One urban mother (Sindh), who was a graduate, said, "Yes the child got some shots, but I don't know what?" Three of 14 were not immunized. One urban mother (Punjab) said "I don't want my child to get sick after these injections," while two thought the distance to health facility was too much.

How frequently did the children get sick?

In the age group 12-23, diarrhea was 'rare' in two infants (8 and 9 months old). Out of 14 infants, six suffered from diarrhea "often" five sometimes, and three rarely. Three of those who had diarrhea often were from rural Sindh.

Type of diarrhea

Twelve of 14 described loose, frequent, offensive motions. One child had watery and another bloody mucoid diarrhea. Eight of 14 had associated vomiting and 4 had fever. The frequency of diarrheal stools was as follows:

4-5 per day	5
6-7 per day	4
10-20 per day	5

Did mother do anything for diarrhea?

Ten of 14 said "yes". The actions they took included going to a doctor (4), feeding rice water, SSS, qaawa, tea (4) or ORS (1) and giving medicines like Kaopectate. All these efforts were intended to stop the diarrhea. The mother who gave ORS had an additional aim of rehydration.

The status of the children with diarrhea

These children with diarrhea looked weak to the mothers (6), were lazy (2), or crying (4), disturbed/cranky (2), wanted to be carried all the time (2) threw up every thing that was put in his mouth (1). The majority complained that children had poor appetite. Four mothers reported their children to be active and smiling.

Mothers' perceived causes of diarrhea

About a quarter of the mothers attributed diarrhea to food, others to teething, to cold, to missing "some one dear, who is away," to fallen fontanel, "nazar," and to dirty bottles; and the rest did not know what caused diarrhea.

Whom does a mother consult?

Two of 3 mothers said that they would consult a doctor to get medicines or injections to stop diarrhea (NWFP, rural). For the same purpose, another gave “phakki” and urqe-shirin (Balochistan, rural) as home remedies. While some kind of fluid was given by three mothers, ORS was given by only one mother for dehydration. For the rest, seeking help was not possible for reasons of distance, access, lack of money, etc.

Concerns about diarrhea being dangerous

Nearly half of the mothers were concerned about loose motions and vomiting, and weakness was the concern of another 5 of the 14 mothers. Dehydration worried 3 mothers, and death was a danger for another 2 mothers. The majority of the mothers expressed their concern about the weak health of infants. Poor appetite during diarrhea was reported by many of the mothers. To reach a health facility was an additional concern of some mothers.

Was diarrhea ever dangerous?

Mothers considered diarrhea as dangerous if it did not improve with medication or if the infant looked dehydrated. It was also considered dangerous if there was associated respiratory infection, if vomiting was incessant, or if diarrhea became persistent. The reason for mothers’ concern was loss of weight, persistent diarrhea, or loose motions turning to bloody diarrhea, and fear of death. However, only a few mothers mentioned dehydration as dangerous, and only one mother recognized such signs of dehydration as sunken eyes or thirst.

Feeding During Diarrhea

Breastfeeding

Do mothers continue breastfeeding?

Eleven of 14 said they continue breastfeeding. More than half of these predominantly breastfed their infants. Two increased the frequency of breastfeeding because the child felt thirsty after passing loose motions, or the child did not eat anything and hence the mother gave breastmilk more often. For three infants, breastfeeding had already been stopped before the diarrheal episode because of insufficient/no breastmilk or the next pregnancy. Some mothers breastfed for religious reasons. The frequency of feeding, as stated by the mothers, was on demand 20 times per day (2), 8-11 times per day (6), 7-8 times per day (1) and 5-6 times per day (2).

The mothers who decreased the frequency of breastfeeding stated:

“The child is sucking less frequently. If it suckles more the diarrhea will get worse.”

“I am worried, as there is no milk in my breast. What will the child take?” (urban)

“I want to feed him, but he has no appetite.” (rural)

“The child is sick, so medicines are more important than breastmilk. I focus on medicine so that child gets better.” (rural)

Bottle-feeding, age/advice

Nearly a third of the mothers in the age group 6-23 were feeding milk in a bottle. Nearly half of these bottle-fed infants received breastmilk, the bottle, and complementary food. In the age group 6-23, five started bottle-feeding in the first 2 months, and the rest between 5 and 7 months. The mothers who were not bottle-feeding their babies believed that it was a source of contamination. All bottle-fed babies were fed buffalo milk for reasons of easy availability, less expense, and suitability for the child. Only one mother fed sugar water in a bottle. These mothers were advised by their husbands, MILs, SILs, or mothers. The reasons were that both bottle and breast was "the best pattern," or that mother's milk was insufficient and hence bottle-feeding was necessary. The advisers stated:

"You don't want to kill the child by keeping him hungry."

"It will fill his stomach and satisfy his needs."

"It is best for the health of the child."

Almost all mothers gave buffalo milk in the bottle. One mother switched over to Maggi soup on the advice of the doctor. Another mother believed that both bottle and breast keep the child satisfied and healthy. Both introduced bottle at one month, yet another gave tea, saying, "what can a poor mother offer in a bottle but tea." Only one mother gave additional water.

The reasons for adding bottle-feeding were insufficient breast milk or no breast milk. One mother said she was very busy, so someone else could feed the child. Another said she gave a bottle at night so that the child would sleep well.

Those who did not bottle-feed thought that bottle could be contaminated, and could give diarrhea. A few mothers thought that bottle-feeding keeps children healthy.

How did mothers change the frequency of bottle-feeding?

Six mothers made some changes, such as feeding more frequently or less frequently. One of the mothers stopped the bottle-feeding at night, while yet another stopped all solids and fed the child bottle only.

Complementary feeding

Maternal perceptions

When to start and why?

Two-thirds of the mothers of this age group who had started giving weaning food believed in starting between 7 and 11 months. These mothers started giving semi-solids to make the child grow and be more active. They were advised by MILs or doctors. One mother stated that "my son is like his father. He is the only male in the family, so my mother-in-law wishes that he grows fast. Hence we started semi-solids at four months, and we give him lot of food."

Four of 14 mothers who gave no semi-solid food (at 11, 12, and 23 months) justified their action by saying they believed solids should be given after 2 years, at one year or at 18 months.

Those who did not give weaning food yet believed it could cause diarrhea, indigestion, or constipation. "Why give when the child is satisfied with milk?"

Foods that should be given

The majority of the mothers believed banana to be a good food during diarrhea as it helps in reducing the number of diarrheal stools. Khichri was considered good for the same reason by a smaller number of mothers. Firmi, kheer, porridge, rice, and rusk were the preferred food by one mother each, as these were easy to digest and good for the child who got weaker with diarrhea. Tea was preferred by two mothers for helping stop diarrhea. These beliefs were popular in Punjab, followed by Sindh.

Food that should be avoided

Here too opinions varied. Roti, halwa, vermicelli, kheer, ghee, were considered "heavy." Meat and daal are difficult to digest; yogurt and citrus are bad for the chest of the child; potatoes, kachalo are "badi" that can produce gas. Spicy food and curry can worsen diarrhea. These taboos seemed to be very common in Punjab.

Practices

After the 24-hour recall, the mothers were asked if this was a typical meal

When asked if this was child's typical or usual diet, ten of 14 mothers said yes.

Mothers who said "no" stated that previously the child was taking other foods.

"When the child is not sick, he is taking yogurt in the morning and rice in the evening, which satisfies him."

"I did not give biscuit as he had diarrhea."

"Sometimes the child takes meat, roti, or rice but not these days."

Was there food taken by the family and not the child and why?

The following foods which were taken by the family were not given to the child during diarrhea:

Roti (5): does not eat, too young, it is hard

Rice (1): has not yet started taking rice

Spinach (1): will worsen diarrhea

Potato: will worsen diarrhea

Curry: too young to take curry, not used to it, it can worsen diarrhea

Pakore,]

Kebab] can worsen diarrhea

Vegetables]

Sweet potato: generally covered with flies, can worsen diarrhea

Solid food: does not yet have teeth to chew.

Has the mother been advised by anyone regarding feeding during diarrhea?

Eight mothers said they were advised by MILs/SILs (5), doctors (2), maternal grandmothers (2), or an LHW (1). The advice given included:

- Give mint qaawa
- Give banana, khichri, kheer, firni
- Don't give banana, khichri, lassi
- Give rusk soaked in water
- Give soft food
- Stop all solids

Except for one who had not yet started giving semi-solids, all mothers complied with the advisers' suggestions.

MAJOR ISSUES AND RECOMMENDATIONS

The majority of the ill babies suffered from diarrhea. Nearly one quarter of mothers attributed diarrhea to food. Others attributed it to teething, cold, dirty bottles, fallen fontanel or nazar. Mothers sought medical help to stop diarrhea. Most mothers (11/14) continued breastfeeding. A third gave milk in a bottle. Mothers thought that banana, khichri, yogurt, rice, firni porridge and rusk were good foods during diarrhea. They thought that meat, daal, ghee, kheer halva, yogurt, citrus, spicy food, and vegetables could worsen diarrhea.

Mothers should know that they must continue breastfeeding and feed more frequently. Besides breastmilk, mothers should also give soup, juices, and rice water. Give small, frequent feeds of ¼ cup to infants 6-11 month age and ½ cup to those between 12-23 month of age. Give 6 feeds per day.

Be extra patient and persistent in feeding. Give the child his favorite foods. Look out for signs of dehydration. Get medical help as soon as possible.

Immunization should be completed according to the EPI schedule.

FEEDING PRACTICE DURING CONVALESCENCE

RECOVERING CHILD, 0-5 MONTHS AND 6-24 MONTHS OF AGE

Mother's Background

The background information of the two age groups included in this section was similar, and hence is dealt with together. However, health care and feeding practices in the two groups are described separately.

Eleven mothers of the age group 0-5 months (9 rural, 2 urban) and sixteen of the age group 6-23 months (12 rural, 4 urban) were interviewed during the recovery of their infants from an acute illness. Their ages were 15 to 35 years and 20 to 40 years respectively. Nine of 11 and 9 of 16 were housewives, while the rest were housewives and worked in the fields as well. Two were self-employed and one was a maidservant. Six of 8 mothers of the age group 0-5 months and 12 (10 rural, 2 urban) of 16 mothers of infants 6-23 months of age were illiterate. Two mothers had under 10 years of schooling, and two had a few years of schooling. The number

of live children born to mothers ranged from one to 10 and 5 to 9 in the two groups. Fathers in both groups were either low-paid employees in the public or private sectors or were self-employed, e.g. barbers or farmers. One father was working abroad. Five of 8 families of the age group 0-5 months and 4 of 16 of the age group 6-23 were nuclear.

Basic Information Regarding 0-5 Recovering Child

Area	District	Community/ Villages	Mother's Age	Mother's Occupation	Father's Occupation	Education		Family		Child Births			Youngest Child's Age
						Ability to Read	Schooling	Type	Members	Total	Living	Died	
Sindh													
Rural	Hyderabad	Ganair	29	Harvester	Loader	Not at all	N.A.	Extended	7	3	3	0	5-months
Rural	Hyderabad	Hala-New	20	House Wife	Govt. Servant	Not at all	N.A.	Extended	5	1	1		4-months
Urban	South-KHI	Akhter Colony	30	House Wife	Peon in Railway	Not at all	N.A.	Nuclear	6	4	4	0	5-months
NWFP													
Rural	Peshawar	Ghulam Hasan Garri	35	House Wife	Govt. Servant P	Not at all	N.A.	Extended	10	6	6	0	4-months
Rural	Swat	Mangoora	20	House Wife	Driver	Little Bit	5-yrs	Extended	10	1	1	0	5-months
Rural	Hazara	Abbotabad	27	House Wife	Driver	Not at all	N.A.	Extended	7	2	2	0	5-months
Rural	Bannu	Hasne Kalin	23	House Wife	Govt. Servant P	Not at all	N.A.	Nuclear	5	3	3	0	4-months
Urban	Mardan	Khan Kot	30	House Wife	Daily Wages	Little Bit	3-yrs	Nuclear	7	5	5	0	3-months
Punjab													
Rural	Sahiwal	61-5L	35	House Wife	Daily Wages	Not at all	N.A.	Nuclear	5	3	3	0	5-months
Rural	Lahore	Phangaalli	40	Sewing	Fruit seller	Not at all	N.A.	Nuclear	No Reply	8	6	2	3-months
Balochistan													
Rural	Quetta	Kili-Bangalzai	20	House Wife	Peon	Not at all	N.A.	Extended	No Reply	2	2	0	5-months

Basic Information Regarding (6-24months) Recovering Child

Area	District	Community/ Villages	Mother's Occupation	Father's Occupation	Education		Family		Child Births			Youngest Child's Age
					Ability to Read	Schooling	Type	Members	Total	Living	Died	
Sindh												
Rural	Hyderabad	Gul Mohd Ganeer	House Wife	Shepard/Farmer	Read well	10-yrs	Nuclear	8	7	6	1	12-months
Rural	Shikarpur	Wazir abad	House Wife	Barber	Not at All	N.A.	Extended	No Reply	7	6	1	12-months
Rural	Hyderabad	Kairea Paara	House Wife	Land Lord	Not at All	N.A.	Extended	No Reply	6	6	0	15-months
Urban	Shikarpur	No Reply	House Wife	Teacher	Little Bit	5-yrs	Extended	5	2	2	0	16-months
Urban	South-KHI	Akhter Colony	House Wife	Sewing	Little Bit	3-yrs	Nuclear	8	6	6	0	23-months
Urban	South-KHI	Akhter Colony	House Wife	Clark	Read well	10-yrs	Nuclear	5	3	3	0	15-months
NWFP												
Rural	Bannu	Hasne Kalan	House Wife	Confectioner	Not at All	N.A.	Nuclear	6	4	4	0	23-months
Rural	Charsada	Pala Dharay	House Wife	Farmer	Not at All	N.A.	Extended	9	2	2	0	10-months
Rural	Swat	Madin	House Wife	Dispensor	Not at All	N.A.	Extended	8	4	4	0	19-months
Punjab												
Rural	Kasoor	Wadana	House Wife	Farmar	Little Bit	4-yrs	Extended	11	1	1	0	7-months
Rural	Rahim-Yar-Khan	Nawa-Kot	House Wife	Carpenter	Little Bit	6-yrs	Extended	10	5	5	0	10-months
Rural	Rahim-Yar-Khan	Nawa-Kot	House Wife	Lab. Technician	Not at All	N.A.	Extended	13	4	4	0	21-months
Rural	Sahiwal	61-5L	House Wife	Teacher	Can Red Well	5-yrs	Extended	No Reply	5	5	0	10-months
Rural	Sahiwal	61-5L	House Wife	Works Abroad	Not at All	N.A.	Extended	No Reply	1	1	0	12-months
Urban	Lahore	Tajpura Colony	House Wife	Factory Worker	Little Bit	3-yrs	Extended	5	4	2	2	17-months
Balochistan												
Rural	Quetta	Nawa Kallin	House Wife	Peon	Not at All	N.A.	Extended	8	2	2	0	12-months

IV. Findings from Household Trials of Improved Practices (TIPs)

A total of 91 household trials were carried out to ascertain the potential for changing breastfeeding and complementary feeding practices of mothers of children from 0-24 months of age. The trials were carried out in the four provinces of Pakistan in both urban and rural settings in December 1997.

The objectives of the trials:

- To test at the household level the acceptability and feasibility of possible recommendations for improving young child feeding.
- To get realistic input from mothers on their willingness to try recommended changes and their response to the trials.
- To gather information that will guide the development of an effective IEC strategy to improve feeding practices and child nutrition status.

For each group studied in the household action trials, the following issues were highlighted:

Which options are mothers most willing to try?

Which recommendations were mothers willing to adopt and which were more difficult to implement?

Which constraints are strongest and most resistant to change and which motivations were most effective?

Mothers

6-11 Healthy Child (22)	TIPs	Rural	14	Urban	8
12-24 Healthy Child (20)	TIPs	Rural	16	Urban	4
0-5 Child Diarrhea (8)	TIPs	Rural	6	Urban	2
6-24 Child Diarrhea (14)	TIPs	Rural	10	Urban	4
0-5 Recovering Child (11)	TIPs	Rural	9	Urban	2
6-24 Recovering Child (16)	TIPs	Rural	12	Urban	4

Healthy Children, 6-11 Months of Age

Twenty-two (14 rural and 8 urban) household trials were carried out in Balochistan, Punjab, NWFP, and Sindh.

Ideal Feeding Practice:

Continue breastfeeding but introduce soft foods. By the sixth month, start with soft, mashed foods such as banana and potato. Introduce soft foods from the family foods (khichri with yogurt, choori, kheer, daal, mashed potato, banana). Begin with a small spoonful until the child is eating 2 to 3 spoonfuls for each month of age, 3 times a day.

Diet Analysis of TIPS-I**Breastfeeding/Frequency of BF:**

Initial diet analysis for TIPS1 (the initial TIPS interview, for assessment) showed that 20 out of 22 mothers were breastfeeding. There was a lot of variation in the frequency of breastfeeding. 7/20 mothers were breastfeeding from two to six times per day, 3/20 were breastfeeding 7-9 times a day, and 5/20 were breastfeeding 10 to 15 times in a day. Apart from the children who were bottle-fed, seven (3/8 urban and 4/14 rural), children were mixed fed.

Consumption of Soft Foods(Variety/Frequency/Amount)

Six urban and 11 rural children were getting solid foods. Nine of 22 children were eating 3 or more times per day (meals plus snacks).

Eight rural and 5 urban children were in the 6-9 age group, and 6 rural and 3 urban children were in the 9-11 month age group. Two urban and 5 rural children were taking solids fewer than 3 times. Four of 8 urban and 4/14 rural children were taking 3 meals. Only 2 children (1 urban and 1 rural) were taking 3 meals and two snacks.

The type of foods served in the urban areas were biscuits, banana, eggs, rice, apple, suji halwa/kheer, and yogurt. In rural areas, 3 mothers were also giving cerelac, roti, boiled rice, khichri, and rusks with tea. The most common addition was other milk and teas (7/22). Most children were not getting an adequate amount of food in the 6-9 age group. Most of them were not getting more than 2-4 tablespoons of halwa, khichri, yogurt (both urban and rural). In the 9-11 age group, the amount of semi-solids like cerelac, khichri or halwa given on average at one meal was 4 tablespoons.

Most of the children were receiving no vitamin C or iron-rich foods. Only 8/22 children were getting whole wheat products. Only two children were getting any lentils, this in the form of khichri. Only two rural children(10 and 11 months old) were getting roti. Only two mothers from Punjab reported giving a potato to their child. One urban and 4 rural children were eating a banana (the only fruit). One mother reported giving a piece of an apple.

Calories

Out of 8 urban children, only 3 were getting adequate calories according to their age. Only 4/14 children were getting adequate calories. Five children were getting between 250 and 494 calories. One of the reasons for this low calorie intake amongst eight mothers was that they were only breastfeeding between 4-6 times, and were not giving semi-solids.

Major dietary problems:

Problem 1: Mothers are not giving complementary foods or giving too little (at one meal time and

also in 24 hours) or not frequently enough: 12/14 rural and 7/8 urban mothers were identified with this problem.

- Problem 2: Mothers are not giving enough foods that have enough vitamins and minerals or variety: 10/14 rural and 4/8 urban.
- Problem 3: Mothers are giving other milks.
- Problem 4: Mothers think they are too busy to feed their children.
- Problem 5: Mothers are not using proper hygiene.
- Problem 6: Mothers lack confidence in their feeding practices.
- Problem 7: Mothers are not giving food in the proper consistency.

Recommendations given to mothers of children identified with these problems.

1a. Mothers are not giving complementary foods or giving too little or not frequently enough.

1a. Feed your child at least three times daily.

10/14 rural and 6/8 urban mothers who were giving solid foods but not in sufficient frequency or amount were given the recommendation in the second interview (TIPs-II).

Constraints and motivations in promoting this recommendation:

Initial reactions of mothers to this recommendation were all positive. Only one mother said that she can feed her child three times but cannot cook for him separately.

Some of the **positive reactions** were:

“I will cook soft food and give it at least three times. This is easy.”

“I will give it, but in small quantities because before I used to give only milk and biscuit and bottle milk.” (NWFP)

“Yes, I will give him food three times.” (Balochistan)

“I will do so. It is easy to give what he likes and cook and keep and give it. If he does not like it I will give something different.” (urban)

“What you are saying is correct. That is how children get used to foods. If I have the time I will do so.”

“When she cries I breastfeed her. Now I know I will breastfeed her every two hours and give her some other light meals.”

Out of the 10/10 rural and 5/6 urban mothers who agreed to try the recommendation, 9/10 rural and

5/5 urban mothers actually did. The mothers who followed the recommendation gave the child roti, rice, firni, khichri and halwa. Some of the positive reactions of mothers who tried the recommendation were:

"I can give the child a variety of foods, and the child likes to eat different variety of foods."
(Balochistan)

"The child has started eating, and his cheeks are becoming red." (NWFP)

"After eating semi-solids, the child is satisfied and sleeps well." (NWFP)

Some **negative reactions** were:

One mother from Sindh said that she tried to feed the child twice but he vomited so she discontinued.

Another mother who had agreed to try but did not said that she had to wash clothes, clean utensils and cook food so did not get time to act on the recommendation. She also said that the child does not eat.
(Punjab)

All mothers who tried this recommendation said that they would continue except for one child who vomited.

1b. Increase the serving size of child of 6-9 months to ½ pao. Give this ½ pao serving thrice daily.

8/14 rural and 5/8 urban mothers were given this recommendation.

Constraints and motivations to promote this recommendation:

Five urban and six rural mothers gave a positive initial reaction saying they would try but they had some concerns. Two rural mothers gave a negative initial reaction to this recommendation.

A mother from Balochistan said "my daughter is too small, I can only give her small quantity of food, just one or two spoons."

A mother from NWFP said "my child eats less food. He will not eat ½ pao of food at one time."

An urban mother said that she will try but "If the child gets diarrhea then I will stop."

Only 3/5 urban and 3/8 rural mothers agreed to follow the recommendation. Out of these six mothers, one urban did not follow the recommendation, saying that the child will eat when he grows up. Five mothers who tried the recommendation said that they would continue. In response to how they would tell others there responses were:

"If some one asks I will tell; otherwise I do not visit anybody."

"I will tell my brother and sister to feed their child in this style so that their child gets healthier."

1c. Breastfeed your child 6-8 times in a day and feed semi-solids during breastfeeds.

Ten of 14 rural and 4 of 8 urban mothers were given this recommendation.

Constraints and motivations:

The initial reaction of most of the mothers was that they are already breastfeeding and they can do this. Seven of 10 rural and 0 of 4 urban mothers agreed to follow this recommendation. Mothers were able to breastfeed 6-8 times. Mothers gave banana, khichri, firni, and suji ka shera, biscuit and yogurt between breastfeeds. Six mothers gave *positive responses* after the trial, including:

“I did not know I could give these things but it's easy to give.”

“The child has started eating other foods now and his health is improving.”

“Now my child is not as hungry as before.”

Only one mother who tried gave a negative response, saying that “I liked your advice but do not have the time to do so.”

1d. Have a set meal time for child (same as the family).

Ten of 14 rural and 4 of 8 mothers were given this recommendation.

Three mothers initially gave a negative response to this recommendation, saying that:

“The child cannot eat yet.” (urban mother)

“The child is very small. I feed him only when he is hungry.” (rural Balochistan)

“I have to feed him myself.” (Balochistan)

Only two rural and two urban mothers agreed to follow the recommendation. Three mothers actually followed the recommendation. Their positive reactions after the trial were:

“I feed him more so he does not cry now.”

“Now because he eats he does not irritate me when I am eating.”

“I do not have to take time out to feed him specially.”

One mother who agreed initially and did not try said:

“It's impossible because I make him sleep and then I cook for the other children, and they eat while he is still sleeping.”

The three mothers who tried said that they would continue with the recommendation.

1e. Feed the child the same foods as the family. If food is spicy, add yogurt, potato or milk.

The recommendation was given to 12 rural and 6 urban mothers. All mothers gave a positive reaction, except for one who said, "no, the child cannot eat the food cooked at home...I will make food separately for him." Seven rural and two urban mothers agreed to try the recommendation; however only four rural and two urban woman actually tried it.

Constraints and motivations:

One mother fed the child kheer, two mothers added yogurt to potato, and one mother added yogurt to curry and fed the child. The positive reactions of these mothers were:

"Time is saved as I did not have to cook separately for the child."

"I did not have to breastfeed the child very often. Now I make him sit with the other children and eat."

One mother who did not follow the practice said:

"I liked the recommendation and will try it, but the time I have I spend in cooking and washing clothes."

All six mothers who tried said that they would continue the recommendation and also tell others.

1f. Make child's diet thick like firni.

The recommendation was given to 5 urban and 6 rural mothers. Five rural and 4 urban mother had positive initial reactions.

"Yes I can make firni and give it to the child." (urban)

"I will make khichri, firni, and kheer for my child so that he becomes fat quickly." (NWFP)

Negative reactions of mothers were:

"Sometimes I do make firni for him, but sometimes I do not have money to do so, although I myself worry about his food." (Punjab)

"I cannot do this because I am alone in the house, and I have three more kids. I'll make firni for him when ever I have the time." (rural Sindh)

Two rural and 3 urban mothers agreed and actually tried the recommendation. The mothers who tried gave kheer and daal to the child. One mother added milk to the rice and also added curd to the salan. One mother added rusk to tea. One mother softened roti in curry.

Positive reactions of mothers after the trial were:

"It saves time and there is no extra expense." (urban Punjab)

"The child liked eating kheer and slept soundly." (rural NWFP)

"It is a good advice. Children should get used to eating semi-solids at this stage." (rural NWFP)

Only one mother who tried gave a negative reaction, saying that she had to take time out to feed the children.

All mothers who tried said they would continue with the recommendation.

One mother said that her mother-in-law and husband asked her not to give solids to the child because she would get diarrhea.

1g. Add some oil, butter, or ghee to child's food.

Four urban and 10 rural mothers were given this recommendation. Nine rural and two urban mothers gave a positive initial response to this recommendation.

"Yes, I will add ghee to the food, will also make a paratha and give it." (NWFP)

"Yes I will use ghee. I will add it to the khichri." (Balochistan)

The negative reactions were:

"I have not started given soft foods to Zafar. When I will start I will add ghee or butter." (rural Sindh)

"I will not do it now. I will do it when the child gets used to eating." (Urban)

Only 4 rural mothers agreed to try it and only two actually tried the recommendation. The reasons for not trying were:

"I did not have the time, as I do not have any one else in the house to help me with the housework." (rural Punjab)

"My aunt forbade me to give oil, and said that the child would get jaundice, so I stopped." (rural NWFP)

One mother who tried said that she added oil to the child's food and liked the recommendation. The other one said she dipped the roti in the salan and gave it to the child. Both said that they would continue and tell others about the recommendation.

1h. Make some food, such as khichri, specially for the child.

Four urban and 8 rural mothers were given this recommendation. Six rural and 3 urban mothers gave an initial positive response. Two rural mothers gave a negative response:

"I cannot do this because my mother-in-law says that rice is a cold food." (rural Sindh)

"There are so many people in the house, and different foods are cooked. I am not sure whether I

will be able to cook separately for the child." (rural Balochistan)

None of the mothers agreed to try this recommendation.

Segment: Mothers of Healthy Children, 6 - 11 months old

Problem- 1 : Mothers are not giving complementary foods, are not feeding frequently enough, or are not giving enough food per serving:

Recommendations	TIPS - II								TIPS - III									
	Total No. of mothers to whom these recommendations were given		Mother's reactions against these recommendations				# Mothers who agreed to try		# Mothers who actually tried		Reaction of mothers after trying these recommendations				Mothers who initially agreed but did not follow the recommendation		Mothers who agreed to continue	
			Positive		Negative						Positive		Negative					
R=Rural, U=Urban	Rural	Urban	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
1a. Feed your child at least 3-times daily	10	5	10	5	0	0	10	5	9	3	8	3	1	0	1	2	7	3
1b. Increase the serving size of child of 6-9 months to ½ pao. Give this ½ pao serving thrice daily	8	5	6	5	2	0	3	3	3	2	3	2	0	0	0	1	3	2
1c. Breastfeed your child 6-8 times daily & feed semi-solids between breastfeeds	10	4	10	4	0	0	7	0	7	0	6	0	1	0	0	0	7	0
1d. Have a set meal time for your child (same as of the family)	10	4	8	3	2	1	3	2	2	2	2	2	0	0	1	0	1	2
1e. Feed the child same food as the family. If food is spicy, add yogurt, potato or milk	12	5	12	5	0	0	7	2	5	2	4	2	1	0	1	0	4	1
1f. Make child's diet thick like "firmi"	6	6	6	6	0	0	2	3	2	3	2	3	1	1	0	0	2	2
1g. Add some oil/butter or ghee to child's food (1-teaspoon per meal)	10	4	9	3	1	1	4	0	2	0	2	0	0	0	2	0	2	0
1h. Make some food specially for child like "khichri"	8	5	6	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0

Total number of cases to whom this problem was identified = 20 (13R+7U)

Problem 2: Not providing enough foods that have enough vitamins and minerals or variety.

2a. Add in-season fruits or vegetables (mango, carrots, peas, apricots) to each meal.

The recommendation was given to 3 urban and 10 rural mothers. All of them gave a positive initial response. Some of the positive reactions were:

“Yes, I will give seasonal fruits like banana.” (Balochistan)

“Vegetables can be given, but I can give fruit to children only when men bring them.”
(Balochistan)

“This I can do. I should be able to feed a banana. No need for me to take permission from any one.” (Punjab)

“I will cook carrots in milk and also give persimmon and apples.” (Punjab)

“I will try to do so. We do not have any fruits in our village. I will tell my father-in-law to bring bananas so that I can give them to the child.” (NWFP)

“I will give carrots, turnips, etc.” (NWFP)

“My child eats fruit every day did not pay any attention to vegetables, carrots and peas are available in the house.” (NWFP)

“I will start giving vegetables and fruits.” (Sindh)

“I will try to do so and will give banana and soft vegetables. This is a good advice.” (urban)

“I will mash potatoes and carrots with a spoon and feed them.” (urban)

Five rural and two urban mothers agreed to follow the recommendation. Five rural and one urban women actually tried the recommendations. Mothers who tried gave banana, curry, apples, and carrots to their children. One mother made “gajrella”; another one mixed butter with vegetables. One mother took out potatoes from the salan, washed it and gave it to the child. Most mothers accepted and liked the idea of giving fruits and vegetables.

Except for one rural and one urban mother, all mothers said they would continue the recommendation. The negative reactions after trying it were:

“I will start giving fruits now but will give vegetables after two months.”

2b. Give the child some of the family's vegetables and mash them. If spicy, add yogurt, potato or rice.

The recommendation was given to 9 rural and 3 urban mothers. All gave positive initial reactions to the recommendation such as:

"If we do not use too much chili."

"I can give this with potato and also soften this and give it to the child."

"Whatever I cook for the family I will give to the child too. I was thinking about it myself. I will consult about this with someone. (Balochistan)

"Now it is cold. I will start giving yogurt after a few days."

"It is good that I can feed what we eat, but I will also cook firni separately for the child."(Punjab)

"I will take out carrots and turnips from a cooked meal and mash them and give roti and rice."

"I will take out vegetables from the salan, mash them, and feed the child." (NWFP)

"I already give banana. Now I can give meats and vegetables too. It is easy." (urban)

Six rural and one urban mother agreed to try the recommendations. All seven of them actually did so. The family foods given to the child were: bread, potatoes, egg and rice. One mother gave roti and salan, whereas others gave any vegetable that was cooked in the house.

Positive reactions of mothers who tried the recommendation were:

"Whatever I have cooked I can give it to the child. Therefore giving food to the child is not difficult." (Balochistan/NWFP)

"It saves time and I do not have to make anything special." (Punjab)

"The child vomited, but I will definitely give this food so that the child's habit is developed." (Sindh)

Only one mother gave a negative response saying that:

"I cannot give vegetables because his mouth gets blisters. I like the recommendation but will start when he grows a little bigger." (Sindh)

Three mothers said that the family did not object, while five of them said that they would continue with the recommendations.

2c. Add vegetable or meat to a food that the child already eats.

Eight rural and three urban mothers were given these recommendations. All of them had positive initial reactions. Examples follow:

"I can give vegetables."

"I'll give soup of vegetables and meat." (Balochistan)

"When available will try." (Punjab)

"When we get meat, I will give the child one or two pieces of it. I will give vegetables."

"I will include vegetables and meat in the child's diet." (NWFP)

"I will do so."

"I will give liver and meat. These will give strength." (Sindh)

"I will give soup of meat and juice of spinach."

"It's easy to do so."

There were two initial negative reactions. In rural Balochistan and Sindh, the mothers said that meat was not readily available in the villages.

Two rural and one urban mother agreed to follow the recommendation. Only one rural and one urban mother actually tried it. One rural mother made soup of meat, turnips and other vegetables, and she found the experience positive, saying that the recommendation was good for her girl.

The urban mother said that she had started giving the food in small quantities and would increase the diet when the child got used to it. Her negative comment about the experience was:

"My child will get other food, and it will be healthier for her, but my time gets wasted as it takes too much time to make her agree to eat the food."

Both mothers who tried said that they would continue with the recommendation. There was one negative response from the urban mother-in-law.

"My mother-in-law was not happy about it. She said by feeding more, the baby will pass more stools and will also get diarrhea."

2d. Include food from the each of the four food groups each day: staples (roti, rice); fruits and vegetables; protein (daal, egg, meat, milk); and fat and sugar.

Eight rural and 3 urban mothers were given this recommendation. All of them had a positive initial response:

"For the child, I will pay special attention to this."

"I will give what is available. If money is available I will give the rest too."

"I will do all that you are saying and increase the diet by giving roti, potato, and rice and vegetables and meat and eggs and milk." (Balochistan:)

"I was doing so. Now I will especially pay attention." (Punjab)

"I will wet the roti in salan and also give seasonal fruits such as oranges, banana, etc."

"I will include one tablespoon of ghee in the diet. I will include meat as well." (NWFP)

"I will do so."

"I will pay special attention and include different foods daily." (Sindh)

"I will do so. I will give the child eggs and soups."

"I will give these. I can do this."

"Yes, it is easy. I will give it will make churi and give it."

"I will give it easily." (urban)

Three rural and one urban another agreed with and tried the recommendation. Mothers tried giving carrots, apples, potatoes and other vegetables that were cooked. One mother tried a variety of things, including giving a paratha with salan, and firni. Most of the mothers said that the children liked potatoes and vegetables. The only negative comments were by two mothers. One said that the child ate the carrots but he did not like the apple. The other one said that she gave carrots but the child did not like them very much.

Two of the rural mothers said that the fathers were happy that the child was eating everything and homemade foods. Three mothers said that they would continue and tell others.

2e. Give your child fruit for a snack every day.

Eight rural and 4 urban mothers were given this recommendation. All of them gave a positive initial recommendation, except for one mother from NWFP, who said that buying fruit every day was difficult. Most of them said that they would give a banana (4). One said she could give an apple, while two mothers said that they could give milk and rusk in between meals.

Two rural and two urban mothers agreed to follow the recommendation. Two rural and one urban mother tried the recommendation. All three mothers who tried gave a banana. The mothers said that the child liked it and that they would continue the practice.

One mother who could not follow the recommendation said that she could not do it because her father-in-law was ill.

Problem- 2 : Mothers are not providing foods that have enough vitamins and minerals or a sufficient variety of foods:

Recommendations	TIPS - II								TIPS - III									
	Total No. of mothers to whom these recommendations were given		Mother's reactions against these recommendations				# Mothers who agreed to try		# Mothers who actually tried		Reaction of mothers after trying these recommendations				Mothers who initially agreed but did not follow the recommendation		Mothers who agreed to continue	
			Positive		Negative						Positive		Negative					
R=Rural, U=Urban	Rural	Urban	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
2a. Add in season fruits or vegetables (mango, carrots, peas, apricots) to each meal.	10	4	10	4	0	0	5	2	5	2	5	2	1	1	0	0	4	1
2b. Give the child some of the families vegetables and mash them. If spicy add yogurt, potato or rice:	9	3	9	3	0	0	6	1	6	1	6	1	1	0	0	0	4	1
2c. Add vegetable or meat to a food that the child already eats:	8	3	8	3	0	0	2	1	1	1	1	1	0	1	1	0	1	1
2d. Include foods from each of the 4 food groups each day: Staple (roti, rice), fruits & vegetables, protein (dahl, egg, meat, milk) and fat and sugar.	8	3	8	3	0	0	3	1	3	1	3	1	0	0	0	0	2	1
2e. Give your child fruit for a snack every day:	8	4	8	4	0	0	2	2	2	1	2	1	0	0	0	1	1	1

Total number of cases to whom this problem was identified = 15 (11R+4U)

Problem 3: Mothers are not giving other milks.

3a. Breastfeed the baby 6-8 times daily.

Four rural and one urban mothers were given this recommendation. Most of them had positive initial responses.

"I can increase the frequency of giving breast milk, but cannot immediately reduce the amount of other milk " (Balochistan)

"I no longer have breast milk. I give other milk." (NWFP)

"I can give Zafar breastmilk. I can do this at night too. I will not give extra milk in a bottle." (Sindh)

"I will find the time to increase the number of times I breastfeed. I will try to increase my own diet too. I do not have to ask any one." (urban)

One rural mother actually tried the recommendation and increased the frequency of breastfeeding from 6 times a day to 10-12 times pr day.

3b. Add milk to infant foods like *kheer* or *suji* instead of giving the child the milk to drink.

Three urban and three rural mothers were given this recommendation. Positive initial responses were:

"Previously my child would get diarrhea. Now that you tell me to give this I will do so to make my child healthy." (Balochistan)

"I will give halwa and suji." (NWFP)

"I will make kheer in milk." (Sindh)

"I will do so -- fry the suji and then mix milk in it -- to improve my baby's health and make him safe from disease." (urban)

Three rural and two urban mothers agreed and also tried the recommendation. Nearly all mothers who agreed gave items made with milk or other soft foods, e.g, with khichri, halwa, and suji ki kheer. Most of them said that they would continue the recommendation.

3c. Switch from a bottle to a cup.

Four rural and three urban mothers were given the recommendation. Three urban and 4 rural mothers agreed and tried the recommendations.

Two mothers initially gave the following negative responses:

"I cannot give drinks in a cup. The child is used to the bottle and I do not have enough breast milk, and if I do not give it with a bottle, she will starve." (Balochistan)

"I will have to put in a lot of effort to stop the bottle because the child is used to it from the beginning." (NWFP)

Two mothers who tried gave the following negative comments after trying the recommendations

"My child does not like anything from a cup." (urban Punjab)

"My child cries because she wants the bottle." (rural NWFP)

The mothers who tried said that they were trying slowly and that it was easy to keep the cup clean. Three mothers said that they would continue the recommendation.

Problem- 3 : Mothers are giving other milks

Recommendations	TIPS - II								TIPS - III									
	Total No. of mothers to whom these recommendations were given		Mother's reactions against these recommendations				# Mothers who agreed to try		# Mothers who actually tried		Reaction of mothers after trying these recommendations				Mothers who initially agreed but did not follow the recommendation		Mothers who agreed to continue	
			Positive		Negative						Positive		Negative					
R=Rural, U=Urban	Rural	Urban	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
3a. Breastfeed the baby 6-8 times daily:	4	1	4	1	0	0	1	1	1	1	1	1	0	0	0	0	1	0
3b. Include milk as part of the infant foods like <i>kheer</i> or <i>suji</i> instead of giving the child the milk to drink:	3	3	3	3	0	0	3	3	3	3	2	3	2	0	0	0	1	2
3c. Switch from a bottle to a cup:	4	3	3	3	1	0	3	3	3	2	2	2	1	0	0	1	1	2

Total number of cases to whom this problem was identified = 7 (4R+3U)

Problem 4: Mothers are not using proper hygiene.

Only one urban mother from Punjab was identified with this problem. The mother tried the following recommendation:

4a. Wash your hands before preparing food, serving food, and after coming from toilet.

The mother actually started washing her hands after washing the child's nappy and before feeding him. She said she would continue the recommendation.

For the problems given below, none of the recommendations were tried in the actual trials.

Problem- 4 : Mothers are not using proper hygiene

Recommendations	TIPS - II								TIPS - III									
	Total No. of mothers to whom these recommendations were given		Mother's reactions against these recommendations				# Mothers who agreed to try		# Mothers who actually tried		Reaction of mothers after trying these recommendations				Mothers who initially agreed but did not follow the recommendation		Mothers who agreed to continue	
			Positive		Negative						Positive		Negative					
R=Rural, U=Urban	Rural	Urban	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
4a. Wash your hands before preparing food, serving food, and after coming from toilet:	0	1	0	1	0	0	0	1	0	1	0	1	0	1	0	0	0	1
4b. Use only clean utensils and plates for food:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4c. Feed the baby from cup instead of bottle-feeding:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4d. Cover the food and heat it well before serving if you must keep the leftovers:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4e. Discontinue the teether or soother:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total number of cases to whom this problem was identified = (R+U)

Outcome of the Trials with Healthy Children, 6-11 Months of Age

During the 24-hour recall after the 6 day trial, overall 13-rural and 6-urban children were getting more calories than before. In the 6-9 age group the increases ranged from 17-507 calories. Out of the 14 children in the 6-9 age group only two were getting less than 680 calories. The increase in calories was due to more frequent breastfeeding as well as an increase in the frequency and amount of food. Three of 22 children were getting breastmilk fewer than six times. The majority of them were breastfed between 6-14 times per day and night.

Other milk (buffalo/cow or formula) were fed to 6 rural and 5 urban children. On average, both rural and urban mothers were giving 6-8 ounces of milk per feed. Among the children being fed other milks, 4 of 6-rural and 2 of 5 urban were bottle-fed, and the rest (2 of 6-rural and 3 of 5 urban) were fed by cup. The frequency of feeding other milk ranged from 1 to 4 times a day.

In the final recall, most mothers (14 of 14 rural and 7 of 8 urban) were giving semi-solid foods. In the 6-9 month age group, one urban and five rural mothers were giving food 2-3 times per day. Out of nine children in the 9 to 12 month age group, two were being fed fewer than four times a day. Three urban and 4 rural children were being fed more than 4 times.

In the 6-9 month age group 2 of 5 were giving 1½ to 2 pao of meals/day. Three of 5 were giving less than the required amount. In the 9-11 months, four of 11 mothers were giving an adequate amount of food. Seven of 11 were giving from ¾ to 1 pao of food during the day. However, the amount of food given as compared to the first 24-hour recall had increased.

The most common foods that were given were: suji-kheer, biscuits, boiled potato, khichri, boiled/fried egg, rusks, kheer, roti, and paratha. Very few mothers were giving rice, apple, guava, and choori.

Healthy Children, 12-24 months of age

Twenty (16 rural and 4 urban) trials with mothers of 12-24 months old children were carried out in all the four provinces. Ten children were between 12-18 months of age, and 6 were between 18-24 months old in the rural sample. In the rural sample all four were between 16-20 months old.

Breastfeeding/Frequency of Breastfeeding:

Twelve rural and one urban child were breastfeeding. Four rural and 3 urban children were not breastfed. The children not being breastfed were above 18 months old. The only urban child who was not breastfed was 16 months old. There was a lot of variation in the number of times the mothers were breastfeeding. Five rural children were being fed between 8-14 times during day and night. For seven children, the frequency ranged from two to seven times a day.

All 4 urban children and 14 rural children were getting other milks and tea made with milk. Five rural and four urban children were fed other milks/tea between one to three times per day. One was fed tea 5 times and the other 7 times in a day.

Consumption of Soft Foods(Variety/Frequency/Amount)

All 20 (rural and urban) children were receiving foods. However there was a lot of variation in the frequency. Amongst the rural children 12 were being fed one to five times a day. Four were being fed between 6-9 times per day.

The four urban children were fed 1, 5, 6, and 8 times in a day. The types of food they were getting were rusks, biscuits, bananas, roti, cerelac, yogurt, rice, egg, potato, pakora, turnips, and vermicellies. Only two children were fed daal, one got saag, and one vegetables. The amount of roti given ranged from a 1/4 to a 3/4 roti. The amount of food given at one time ranged from 2 tablespoons to 1/8th and a quarter cup. Eight of 16 rural and 2 of 4 urban children were getting fruit. Nine children were getting no vitamin C food. Only three rural and three urban children were getting meat as a source of iron. None of the children were getting any iron supplements.

Calories

Thirteen rural and all urban children were getting less than 1100 calories per day. The range of calories varied: 368 was the lowest and 1550 was highest in the rural group. In the urban group the lowest were 519, and the highest was 943.

Major feeding problems identified in this age group were:

- Problem 1: Mothers are not giving complementary foods or giving too little or not frequently enough.
- Problem 2: Mothers are not providing food with enough vitamins and minerals or a sufficient variety of foods.
- Problem 3: Mothers think they are too busy to feed their children.
- Problem 4: Mothers lack confidence in their feeding practices.

Problem 1: Mothers are not giving complementary foods or giving too little or not frequently enough.

1a. Feed your child at least four times daily.

Fourteen rural and 3 urban mothers were given this recommendation. Two mothers gave a negative initial response to the recommendation. They said:

"I do not have time." (urban)

"I cannot give 4 or 5 times but will give 2 or 3 times." (Balochistan)

Fourteen rural and one urban mother tried the recommendation. All mothers were able to feed the child from 3 to five times in a day.

Some of the positive reactions of mother who tried the recommendation were:

"The child is growing well." (Balochistan)

"Roti is good for the child's health." (Balochistan)

"The child is happy and the advice is easy to follow." (Punjab)

"I like the idea of feeding him more. Now he does not irritate me." (Sindh)

The urban mother who tried gave a negative comment, saying that the child passed stools too often.

Thirteen of 14 mothers who tried said that they would continue this recommendation.

1b. Increase the serving to 1 pao for a meal.

Ten rural and 4 urban mothers were offered this recommendation.

The following mothers gave an initial positive response to the recommendation.:

"I will feed rice mixed in milk and give an increased amount." (Punjab)

Three mothers from Punjab gave no responses (Punjab).

"I'll increase the amount from $\frac{1}{2}$ to $\frac{3}{4}$ roti and also increase vegetables." (Balochistan)

"Whatever I was giving, I will increase the amount."

"I will try to increase the amount." (Sindh)

"If the child does not vomit, I will feed him." (Sindh)

"I will follow your advice as it is a matter of my child's health." (Sindh)

"Okay, I will increase the amount of food to 1 pao." (urban)

"The child is having too much tea. I will feed more solid foods so the child could get healthier (urban)

"I also want the child to eat more (a full plate of rice, a full egg)." (urban)

Two mothers from Balochistan gave the following negative response:

"I can not increase the amount but I can feed the child in increased frequency (3-4 times)." (Balochistan)

"Yes, I can do it, but a child cannot not eat a 1 pao of roti." (Balochistan)

Only two rural and three urban mothers agreed to try this recommendation. The mothers who tried were a bit doubtful about the quantity the child could eat. Some reactions on the trials were:

"I increased the quantity but not to 1 pao." (rural Sindh)

"I am trying already but the child cannot eat enough."

All five mothers who tried said that they would continue the recommendation.

1c. Feed the child from his/her own bowl.

Eleven rural and 3 urban mothers were given this recommendation. Initial positive responses were:

"I am already doing it." (Balochistan)

"I am also doing it already." (Balochistan)

"I will do this. I can have an idea of how much child has eaten." (Balochistan)

"I will separate it so I could know how much the child has eaten." (Punjab)

Three Punjabi mothers gave no response.

"I was feeding child in his separate plate. Now I will see how much is actually child eating."

One mother from NWFP gave no response.

"Okay, I will feed the child in separate plate so I could know how much is child eating." (urban)

"I will do so. I could know how much has child eaten." (Sindh)

"I was not feeding the child in separate plate, but from now on I will feed child in a separate plate." (Sindh)

Only three rural and one urban mother agreed to try the recommendations. All mothers who tried gave positive reactions and said that by using the bowl they were able to see how much their child was eating. All of them said that they would continue this recommendation.

1d. Have a set meal time for the child (same as the family).

Twelve rural and 3 urban mothers were given this recommendation. Eight rural and 2 urban mothers gave a positive response, saying that they would try to follow the recommendation. However, some negative reactions included:

"What can I do when others do not want child to eat with them?" (Balochistan)

"It is difficult to feed child with rest of the family." (Balochistan)

"There are other children also, so I can not do this punctually." (Balochistan)

"It is difficult to feed the child with rest of the family. (Sindh)

Only three rural mothers agreed to try the recommendation. Two mothers said that they gave the food to the child with the family, whereas one mother said that the child ate with her. They said that they would try and continue the recommendation.

1e. Feed the child the same foods as the family.

All 13 rural and 4 urban mothers given this recommendation had an initial positive response. Eight rural and 2 urban mothers agreed to follow the recommendation. Seven rural and 2 urban mothers actually tried it. The one who did not try said that she was still cooking the child's food separately.

The ones who tried said that it was easy and it saved time. Most of them added yogurt to the food that was given. Some mothers gave whatever was cooked. One gave leftovers also. All nine mothers said that they would continue and their husbands and mother-in laws supported them in doing so.

1f. Avoid feeding sweets, sugary drinks, and soda, especially before the meals.

Eight rural and 3 urban mothers were given these recommendations. Only one urban mother tried it. However, she said that it is really difficult to keep children away from eating sweets from shops and hawkers.

1g. Add some butter oil or ghee to the child's food.

Ten rural and 3 urban mothers were given this recommendation. The initial responses included:

"I would have to prepare special food for him. That I will do."

"I will increase half a spoon of oil. (Balochistan)

"Yes, I will put ghee in the curry and serve."

"Yes, I will surely do like this so that the children may grow properly and will not bother me."
(Punjab)

"I will make paratha for the children and will also give the children ghee so that they become healthy." (NWFP)

Two gave no response.

"We have plenty of butter and ghee, so I will do it." (Sindh)

"My child used to ask me for it, but I said ghee is not good and didn't give him." (urban)

Five rural and one urban mother agreed with and tried the recommendation. The ones who tried added ghee while cooking the food, put ghee in khichri, made halwa, and gave salan to the child. One mother put ghee on the roti. After the trials mothers gave a positive response, saying that the child liked the food and the recommendation was easy. One mother gave a negative comment, saying:

"When we do not have oil, we do not add it to the child's food." (rural Sindh)

Segment: Mothers of Healthy Children, 12 - 24 Months Old

Problem- 1 : Mothers are not giving complementary foods or giving too little or not frequently enough:

Recommendations	TIPS - II								TIPS - III									
	Total No. of mothers to whom these recommendations were given		Mother's reactions against these recommendations				# Mothers who agreed to try		# Mothers who actually tried		Reaction of mothers after trying these recommendations				Mothers who initially agreed but did not follow the recommendation		Mothers who agreed to continue	
			Positive		Negative						Positive		Negative					
R=Rural, U=Urban	Rural	Urban	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
1a. Feed your child at least 4 times daily	14	3	14	2	0	1-RN	14	1	14	1	14	1	0	1	0	0	12	1
1b. Increase the serving size of child of 6 - 9 months to ½ pao. Give this ½ pao serving thrice daily	10	4	8	4	2-NR	0	2	3	2	3	2	3	0	0	0	0	2	3
1c. Feed the child from his/her own bowl	11	3	8	2	3-NR	1	3	1	3	1	3	1	0	0	0	0	3	1
1d. Have a set meal time for feeding the child (same as the family):	12	3	8	2	2-NR	1	3	0	3	0	3	0	0	0	0	0	3	0
1e. Feed the child the same foods as the family. Add yogurt, potato or milk if spicy	13	4	11	4	2-NR	0	8	2	7	2	7	2	1	0	1	0	7	2
1f. Avoid feeding sweets, sugary drinks & soda, especially before meals	8	3	5	3	3-NR	0	0	1	0	1	0	1	0	1	0	0	0	1
1g. Add some oil/ butter or ghee to child's food. (1 teaspoon per meal)	10	3	9	2	1-NR	1-NR	5	1	5	1	5	1	0	0	0	0	5	0

Total number of cases to whom this problem was identified = 14 Rural + 4 Urban

Problem 2: Mothers are not providing food that have enough vitamins and minerals or a sufficient variety of foods.

2a. Add in-season fruits or vegetables (pumpkin, mango, carrots, peas, apricot) to each meal.

All 7 rural and 3 urban mothers given the recommendation had initial positive reactions:

"Yes, I will do so. I will make him eat an apple and a banana as everything is available at our home."

"Nowadays, orange, kino, and carrot are cheap, so I will bring them for the child."

"Not fruits, but vegetables are available at home, so I will give them to the child so that he has more blood." (NWFP)

"Since we live in a village and not in the city, whenever I get some fruit I will feed him." (Sindh)

"Yes, I can get fruits and vegetables for the child." (urban)

"Yes, I can give him fruits and vegetables. It's easy for me." (Balochistan)

Six rural and 3 urban mothers actually agreed with and tried the recommendation. The mothers added apples, banana, carrots, and potatoes to the child's diet. The only negative comment from the mothers who tried it was:

"Sometimes it is difficult to bring fruit from the market."

All mothers who tried said that they would continue the recommendation.

2b. Give the child some of the family's vegetables that you have cooked.

The recommendation was given to 4 rural and 3 urban mothers. There was no negative reaction to the recommendation. Positive reactions were:

"If spicy, I can add yogurt, potato, or rice."

"Yes, I can feed him like this." (Balochistan)

"Yes, I have potatoes and yogurt at home. I will mix it in curry and will feed the child."

"It's easy. In this way I won't have to prepare halwa for the child." (NWFP)

"Okay, I will do this."

"It's an easy remedy. I will do it." (Sindh)

"Yes, I can do this. I can make light food for him."

"Yes, it's easy. By adding yogurt and potatoes, I can reduce the spices." (urban)

Four rural and 2 urban mothers actually tried the recommendation. All of them were positive about their trial. One of the key things they liked was that the mother did not have to cook separately for the child. They found it easy and one mother said that earlier she was giving a very small amount but now she could feed more by adding yogurt and milk to the *salan*. Four of them said that they would continue the recommendation.

2c. Add vegetables or meat to a food that the child already eats.

The recommendation was given to 8 rural and 2 urban mothers. The initial response was partially positive, and mothers agreed to give vegetables. However, a few of them commented that it was difficult to give meat. See below:

"I can not make him eat meat daily, but I can add vegetables and eggs." (Balochistan)

"I can give him vegetables but meat only sometimes."

"I will add vegetables and meat in the child's daily diet. The child will get energy. (Punjab)

"I hardly get meat. I can make him eat vegetables."

"Yes, I can feed the child vegetables." (NWFP)

"No, I will not make him eat meat. I will give him vegetables." (Sindh)

"This is easy. I can give him soup and few pieces of meat, provided my husband brings it. Vegetables I will surely give him." (urban)

Five rural and one urban mother agreed to try the recommendation. However, only 4 rural women actually tried it. The rural mother who did not try gave the following reason:

"We cook vegetables, but it is difficult to give meat. My mother-in-law says that the child cannot digest it." (rural NWFP)

"I cannot give meat every day because it is very expensive." (urban NWFP)

All rural mothers who tried said that they would continue the recommendation.

2d. Include foods from each of the four-food groups each day: staples (roti, rice), fruits and vegetables, proteins (daal, egg, meat, milk) and fat and sugar.

The recommendation was given to 7 rural and 2 urban mothers. Initial responses of a few mothers were:

"I will make him eat roti. Meat is not cooked very often. I can give him egg." (Punjab)

"I am already doing this. I feed him roti, daal, rice, and vegetables." (NWFP)

Only 2 rural women actually tried the recommendation. Both had a positive experience and said they would continue it.

2e. Give your child fruits for a snack each day.

Eight rural and three urban mothers were given this recommendation. They said:

"I am already giving him banana. I will try to give him other fruits."

"Of course I will make him eat since we have fruit at our home." (Punjab)

"Yes, I can do like this. It will make him healthy." (NWFP)

"My child already eats fruit, but from now I will be more regular." (Sindh)

"Yes, I will give him fruits. Previously I didn't when my husband brought them, but I will make sure that the child eats them." (urban)

"Yes, I can give him fruits." (Balochistan)

One rural and one urban woman tried. The mother from urban NWFP after the trial said: "It is difficult to bring fruit from the shop if the child's father is not at home."

The rural mother said that she would continue to follow the recommendation.

Problem- 2 : Mothers are not providing foods that have enough vitamins and minerals or a sufficient variety of foods:

Recommendations	TIPS - II									TIPS - III								
	Total No of mothers to whom these recommendations were given		Mother's reactions against these recommendations				# Mothers who agreed to try		# Mothers who actually tried		Reaction of mothers after trying these recommendations				Mothers who initially agreed but did not follow the recommendation		Mothers who agreed to continue	
			Positive		Negative						Positive		Negative					
R=Rural, U=Urban	Rural	Urban	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
2a. Add in season fruits or vegetables (pumpkin, mango, carrots, peas, apricot) to each meal:	7	3	7	3	0	0	6	3	6	3	6	3	0	0	0	0	6	3
2b. Give the child some of the family's vegetables that you have cooked. If spicy add yogurt, potato, or rice:	7	3	6	3	1-NR	0	4	2	4	2	3	2	2	1	1	0	2	2
2c. Add vegetables or meat to a food that the child already eats:	8	2	8	1	0	1-NR	5	1	4	0	4	0	1	1	1	1	4	0
2d. Include foods from each of the 4 food groups each day: i.e. staple (roti, rice), fruits & vegetables, proteins (dahl, egg, meat, milk) and fat and sugar:	7	2	6	1	1-NR	1-NR	2	0	2	0	2	0	0	0	0	0	2	0
2e. Give your child fruits for a snack each day:	8	3	5	3	3-NR	0	2	2	2	1	2	1	0	0	0	1	2	0

Total number of cases to whom this problem was identified = 9 Rural + 3 Urban

Problem 3: Mothers are feeding other milks.

Two rural and one urban mother was identified with this problem. The following recommendations were given to these mothers:

3a. Breastfeed the child 6-7 times a day.

This recommendation was given to one urban and two rural mothers, none of whom agreed to follow it.

3b. Include milk as a part of child's food. Serve *kheer* or *suji* made with milk instead of giving the child the milk to drink.

This recommendation was given to three rural and one urban mother. Two rural and one urban mother agreed to try, but only the rural mothers actually followed the recommendation. Both mothers said that the child's health was improving and that the child liked suji with milk. The urban mother modified and gave cerelac, saying that her husband was going abroad and she was busy.

3c. Switch from a bottle to a cup.

One rural and one urban mother tried these recommendations. Their positive comments were that they did not have to clean the bottles. One mother who tried said that her clothes get dirty when she feeds him with a cup. Both said that they would continue.

Problem- 3: Mothers are feeding other milks:

Recommendations	TIPS - II									TIPS - III								
	Total No. of mothers to whom these recommendations were given		Mother's reactions against these recommendations				# Mothers who agreed to try		# Mothers who actually tried		Reaction of mothers after trying these recommendations				Mothers who initially agreed but did not follow the recommendation		Mothers who agreed to continue	
			Positive		Negative						Positive		Negative					
R=Rural, U=Urban	Rural	Urban	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
3a. Breastfeed the child 6-7 times a day	2	1	1	0	1-NR	1	0	0	0	0	0	0	0	0	0	0	0	0
3b. Include milk as a part of child's food. Serve <i>kheer</i> or <i>suji</i> made with milk instead of giving the child the milk to drink:	3	1	3	1	0	0	2	1	2	0	2	0	1	0	0	1	2	0
3c. Switch from a bottle to a cup:	2	1	2	1	0	0	1	1	1	1	1	1	1	0	0	0	1	1

Total number of cases to whom this problem was identified = 3 Rural +1 Urban

Problem 4: Mothers think they are too busy to feed their children.

None of the recommendations were adopted by mothers, although all reacted positively when the recommendations were first offered to them.

Problem- 4 : Mothers think they are too busy to feed the child:

Recommendations	TIPS - II								TIPS - III									
	Total No. of mothers to whom these recommendations were given		Mother's reactions against these recommendations				# Mothers who agreed to try		# Mothers who actually tried		Reaction of mothers after trying these recommendations				Mothers who initially agreed but did not follow the recommendation		Mothers who agreed to continue	
			Positive		Negative						Positive		Negative					
R=Rural, U=Urban	Rural	Urban	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
4a. Make time to feed your child or watch & encourage your child to feed themselves:	2	0	2	0	0	0	2	0	2	0	2	0	0	0	0	0	1	0
4b. Feed the same food as the family. Add yogurt or potato if spicy:	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4c. Give your child their own bowl & small spoon:	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4d. Avoid putting foods in the feeder. Use cup or glass instead:	2	0	2	0	0	0	2	0	1	0	0	0	1	0	1	0	0	0

Total number of cases to whom this problem was identified = 2 Rural + 0 Urban

Problem 5: Mothers are not using proper hygiene.

5a. Wash your hands before preparing food, serving food, and after using the toilet.

Only two rural mothers were given this recommendation. One said she would continue the practice, and the other said she would follow it if she had time.

5b. Use clean utensils for food.

Two rural mothers were given this recommendation. They did not try it.

5c. Serve freshly prepared foods.

Two rural mothers were given the recommendation and one followed it.

5d. Switch from a bottle to a cup.

Only one rural mother was given this recommendation. The mother tried but the child cried, so she discontinued the practice.

5e. Cover food and heat it well before serving if you must keep leftovers.

Two rural mothers were given this recommendation, but they did not agree to try it.

5f. Discontinue the soother.

One rural mother was given the recommendation but did not try it.

Outcome of the Trials among Mothers of 12-24 Month Olds

The most popular recommendations mothers agreed to try was to feed the child 4-5 times a day. Mothers also liked the idea of giving family foods by adding milk, yogurt or potato to reduce the spices. Only five mothers agreed to increase the amount to 1 pao.

However during the 24-hour recall after the six-day trial, overall 14 of 16 rural and (3 of 4 urban children) were getting more calories than before. Seven rural and 3 urban children were consuming from 630 to 973 calories. There were only 8 rural and one urban children who were getting adequate calories. The frequency of breastfeeding was improved, so only two children were getting breastmilk fewer than 6 times. Two rural mothers started giving other milk; however, 5 rural and 2 urban mothers were still giving milk less than three times. On average both rural and urban mothers were giving 6-8 ounces of milk per feed.

Only one rural and one urban mother was using a cup. The other 6 rural and 3 urban mothers were feeding with a bottle. Ten of 16 rural and two of 4 urban mothers were giving tea in a cup. The frequency ranged from once to four times a day. Most mothers (14 of 16 rural and all four urban) were giving food 4-7 times per day at the third recall. However, most of the mothers

were not giving the right amount of food at one meal. The amount varied between 1 cup to 3 cups of food in the whole day. The most common foods that were given were roti, paratha, biscuits, rusks, bananas, and potatoes. Only two mothers were giving rice, apple, yogurt, only one mother was giving daal, and five mothers gave meat to the child.

Problem- 5 : Mothers are not using proper hygiene:

Recommendations	TIPS - II								TIPS - III									
	Total No. of mothers to whom these recommendations were given		Mother's reactions against these recommendations				# Mothers who agreed to try		# Mothers who actually tried		Reaction of mothers after trying these recommendations				Mothers who initially agreed but did not follow the recommendation		Mothers who agreed to continue	
			Positive		Negative						Positive		Negative					
R=Rural, U=Urban	Rural	Urban	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
5a Wash your hands before preparing food, serving food and after using toilet:	2	0	2	0	0	0	2	0	2	0	2	0	0	0	0	0	2	0
5b. Use only clean utensils and plates for food:	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5c. Serve freshly prepared foods:	2	0	2	0	0	0	1	0	1	0	1	0	0	0	0	0	1	0
5d. Switch from a bottle to a cup:	1	0	1	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0
5e. Cover food and heat it well before serving if you must keep leftovers:	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5f. Discontinue the teether or soother:	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total number of cases to whom this problem was identified = 2 Rural & 0 Urban

Child Suffering from Diarrhea, 0-5 Months of Age

Ideal practice: Increase the frequency of breastfeeding during and following illness, eight times during the day and eight times during the night.

TIPs-I

Trials were carried out with mothers of 8 children who had diarrhea. Six were exclusively breastfed, 1 was getting both breastmilk and other milk, and 1 was bottle fed. In TIPs-I, none of the mothers had increased the frequency of breastmilk. Four of 8 children were being fed less than 10 times a day. Only 2 were fed 12 times a day. Most of the children were getting only between 400 and 550 calories. Two were getting 600 and 705 calories.

Four of 8 children were getting additional liquids and other milk. One child was being given quavah and one was getting an egg.

TIPs-III

After the trials, the same number of children were breastfed. The mothers increased the frequency: three of 3/8 mothers increased the breastmilk frequency to 14 times per day. One mother who was feeding only 4 times increased to 8 times per day. The rest of the mothers (4 of 7) were breastfeeding between 7-12 times day and night. Three mothers were giving other milks, including one who was giving the milk by bottle and another who was feeding with a cup. The mothers who were giving tea had stopped giving tea in the third interview. More mothers had started giving semi-solids (5 of 8).

Problems identified

Major problems

- Problem 1: Breastfeeding was decreased during the diarrhea in 7/8 children.
- Problem 2: 4 of 8 mothers were not using proper hygiene.
- Problem 3: 4 of 8 mothers were not exclusively breastfeeding, not breastfeeding frequently enough, or not breastfeeding at all.
- Problem 4: 2 of 8 mothers thought that diarrhea is caused by "nazar", "saya", and heat.

Problem 1: Breastfeeding was decreased during diarrhea in 7 out of 8 children.

The recommendations given in table below were given to mothers of these children. Most of the mothers had positive reactions to all the recommendations except for the recommendation on increasing her food. See initial responses below.

- 1a. Continue breastfeeding with increased frequency, at least 10-12 times in a day and**

night.

Positive reactions included:

"Breastmilk is free and does not need to be prepared or heated. This will increase my milk." (urban)

"This is easy. I will increase the number of times I will feed day and night. Twelve times I will feed so that my milk increases." (NWFP)

"It is true my milk is good. I will only give my child breastmilk." (Sindh)

"I will try to breastfeed more often." (urban)

"I used to feed 4-5 times. Now I will increase and replenish the water lost in diarrhea."

"I will definitely give it. I will take no advice from anyone. I want to breastfeed." (Punjab)

1b. Breastfeed after every stool.

Positive reactions included:

"I can do this so that my child recovers. I will breastfeed my child after every bowel." (urban)

"I will breastfeed my child after every bowel. This child is very expensive. He was born after three girls." (NWFP)

"Yes, I will breastfeed after every bowel." (Sindh)

"I will breastfeed." (urban)

"I will breastfeed after every bowel. This is something I can do so that the water loss can be recovered." (Punjab)

There were no negative reactions.

1c. Avoid medicine for non-bloody diarrhea.

Positive reactions included:

"This is good if my child can recover without the doctor's help. I will definitely breastfeed." (urban)

"Without bleeding in the bowel I will not take the child to the doctor, because you say that medicine can be harmful for the child. I will feed milk at home." (NWFP)

"I will stop medicines and will also stop giving "errak" in sugar water." (Punjab)

"If bleeding begins, I will give medicine." (Sindh)

1d. Increase the foods and fluids you eat so that you can produce a large amount of milk.

Positive reactions included:

"This is good. Every time I breastfed I had a sinking heart feeling. Now I will increase my diet." (urban)

"I will increase my diet and water intake so that my milk increases." (NWFP)

"Yes, I will practice it is for our benefit." (Balochistan)

"I will try." (urban)

"I can increase my diet. I will increase the quantity of my milk and my diet." (Sindh)

"I will increase my diet of lassi and milk. I do not have to ask any one." (Punjab)

Negative reactions included:

"I will increase the intake of water. I live with my in-laws. That is why I cannot increase my diet. They will say I feel hungry all the time." (Punjab)

Options mothers were willing to try, motivations, and constraints:

The most effective recommendation was to continue and increase the frequency of breastfeeding. Mothers said it was easy to practice; the child sleeps well and doesn't cry; it makes up the loss of water; it prevents having to go to the doctor.

All mothers who were asked to breastfeed after every stool, after the trials said that the diarrhea had improved; they did not have to go to the doctor; and that it was easy and cheap.

The mother given the recommendation to increase her diet found this to be easy to do. One mother showed her concern saying that: "I feel hungry at night and if I will eat what will my family say?"

Only one mother was giving medication to the child. She stopped the medication on the third day and said that she was just breastfeeding and her child was recovering from diarrhea.

Segment: Mothers of Children with Diarrhea, 0 - 5 Months Old

Problem- 1 : Mothers decrease breastfeeding during diarrhea:

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
1a. Continue breastfeeding with increased frequency, at least 10-12 times in a day and night:	6	6	0	5	5	5	0	0	5
1b. Breastfeed after every stool:	7	7	0	3	3	3	0	0	3
1c. Avoid medicine for diarrhea, unless it is bloody:	6	6	0	1	1	1	0	0	1
1d. Increase the foods and fluids you eat so that you can produce a large amount of milk:	7	7	0	5	5	5	1	0	5

Total number of cases to whom this problem was identified = 7 (5R+2U)

Problem 2: Mother doesn't use proper hygiene.

Four recommendations were given to 4 mothers. Initial responses to the recommendations are given below:

2a. Wash your hands before preparing, serving food, and after using the toilet.

Positive Reactions:

- No response [Balochistan]
- I will wash hands before eating, serving food, and going to the toilet [urban] [NWFP]
- I will wash hands with soap before cooking; I can do that [urban] [Sindh]
- I will properly wash hands with soap, you do not have to ask me [Punjab]

Negative Reactions:

None

2b. Only use clean utensils and plates for food or drink.

Positive Reactions:

- No response [Balochistan]
- I will give green tea in a clean cup to the child even now I use a clean cup and spoon. [NWFP] [urban]
- Our utensils are clean but before using them I rinse them out. [Sindh] [urban]

Negative Reactions:

None

2c. Do not use bottle to feed your child.

Positive Reactions:

- No response [Balochistan]
- I do not give a bottle and will not give it. [NWFP] [urban]
- I breastfeed the child, he has a habit of drinking from the bottle. I will try to give it in a cup. [Sindh][urban]
- I will try to discourage his habit of bottle feeding, and for extra milk I will give in a cup and spoon. [Punjab]

Negative Reactions:

None

2d. Discontinue the teether and soother.

Positive Reactions:

- No response [Balochistan]
- I will stop the soother if my child can recover without the soother it is very good [NWFP] [urban]
- I will not give a soother in the future.
- I do not give this [Sindh] [urban]
- No response [Punjab]

Negative Reactions:

None

Options mothers were willing to try/ Motivations/Constraints

The mothers were more receptive to the recommendation to wash hands, and to stop bottle feeding.

Three mothers tried and said that it is good and linked it to the following religious statement:
"Cleanliness is half of your faith"

2/4 mothers agreed and tried the recommendation to avoid bottle feeding. Positive motivations were:

"I do not have to get up many times, and do not have to heat the milk".

1 out of 3 mothers who were advised, agreed and followed the recommendation. The result was that they stopped using the teether.

1 mother was asked to keep the utensils clean, she followed the advice and said she would continue.

Problem- 2 : Mothers are not using proper hygiene:

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
2a. Wash your hands before preparing, serving food, and after using the toilet:	4	4	0	3	3	3	0	0	3
2b. Use only clean utensils and plates for food or drink:	3	3	0	1	1	1	0	0	1
2c. Do not use bottle to feed your child:	4	4	0	2	2	2	0	0	2
2d. Discontinue the teether and soother:	3	3	0	1	1	1	0	0	1

Total number of cases to whom this problem was identified = 4 (4 rural and 0 urban)

Problem 3: Mother is not exclusively breastfeeding, not breastfeeding frequently enough, or not breastfeeding at all.

4 out of 8 mothers were identified with this problem. The initial responses to the three recommendations are given below:

3a. Breastfeed more frequently, 10-12 times a day and night.

Positive Reactions:

- I will now increase the number of times I breastfeed this advice is good for my child [Balochistan]
- I will breastfeed more times if before I fed 10 times now I will do it 12 times so that my child recovers quickly [Punjab] [urban]
- I will try to increase the number of times I breastfeed [Punjab]

Negative Reactions:

- Ali has not been breastfed, and does not breastfeed now, so how can I begin [Sindh] [urban]
- I do not have enough breast milk [Punjab]

3b. Switch from bottle feeding to giving milk by cup and spoon.

Positive Reactions:

- No response [Balochistan]
- I am thinking that how can a baby drink from a cup, and I will now try to clean the cup and spoon with soap and warm water and then give. [NWFP] [urban]
- I will try to do this [Sindh] [urban]
- I will do this. I will put "sowanf" in buffalo milk and administer it in a cup and spoon [Punjab]

Negative Reactions:

None

3c. Only breastfeed the child and stop using bottle.

Positive Reactions:

- No response [Balochistan]
- Now I understand, I will throw away the bottle, and I will not use it. I did not give tea to the child, he seems better today [NWFP] [urban]
- I will try in a cup and spoon and increase the times I breastfeed so that more milk is produced [Punjab]

Negative Reactions:

- I cannot do it [Sindh] [urban]

Options mothers were most willing to try/Constraints and motivations:

The most popular recommendation was to breastfeed more frequently. 2 out of 4 mothers agreed and tried. The motivations were:

“The child sleeps well” and “is satisfied and not hungry.”

These recommendation to switch from a bottle to a cup were given to 3 mothers. One agreed and tried. Motivations were:

“Do not have to clean the bottle.”

Problem- 3 : Mothers are not exclusively breastfeeding, not breastfeeding frequently enough, or not breastfeeding at all:

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
3a. Breastfeed more frequently, 10-12 times a day and night:	4	3	1	2	2	2	0	0	2
3b. Switch from bottle feeding to giving milk by cup and spoon:	3	3	0	1	1	1	0	0	1
3c. Only breastfeed the child and stop using bottle:	3	2	1	0	0	0	0	0	0

Total number of cases to whom this problem was identified = 4 (3R+1U)

Problem 4: The community, family and mother think that diarrhea is caused by “nazar,” “saya,” and heat, etc.

4a. Diarrhea is actually caused by germs that get in food, in water, and in other drinks.

Positive Reactions:

- No response [NWFP]
- Now I know that it is caused by germs [Sindh]
- No response [Balochistan]
- Treatment will only be done on the advice of the family members [Punjab]

Negative Reactions:

- Heat and cold and the food the mother eats [Sindh]
- Due to shivering you get diarrhea [Punjab]

3b. Give more frequent feedings of breast milk.

Positive Reactions:

- I can feed milk 2-3 times a day. When the child cried I fed him. Now I will continue it. [Sindh]
- I do not need anyone’s advice. I will feed my self this will improve the child health and it will save him from disease [Punjab]
- No response [Balochistan]

Negative Reactions:

None

Options Mothers were willing to try /constraints and motivations

The recommendation to give more breast milk was tried by one mother. The motivation was that the child will recover quickly.

Positive motivation for increasing the breastfeeding frequency was that the child will not get hungry.

Problem- 4 : Mothers, the community, and families think that diarrhea is caused by “nazar,” “saya,” and heat

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
4a. Diarrhea is actually caused by germs that get in food in water and in other drinks:	2	2	0	1	1	1	0	0	1
4b. Give more frequent feedings of breast milk:	2	2	0	1	1	1	0	0	1

Total number of cases to whom this problem was identified = 2 (2R+0U)

(6-24 Months) Child Suffering from Diarrhea

Ideal practice: If your baby has diarrhea, besides breast milk and regular food, give soup, juices, rice, and water. Look for signs of dehydration and if any seen bring the child to a trained health worker.

Frequency of BF: 16 times day and night.

Semi-solids: If the child is unable to eat family foods, give soft foods 4-5 times a day.

Amount: Less than ½ pao 6 times a day.

Foods: Khichri, yogurt, mashed banana, mashed potato

Diet Analysis of TIPS-I:

14 trials were carried out with mothers of children 6-24 months who had diarrhea. 7 children were in the 6-11 month age group, and 7 were in the 12-24 month age group.

Breastfeeding/frequency of BF/other milk

6-11 months :

Initial diet analysis for TIPS-1 showed that all 7 children were breastfed. There was a lot of variation in the number of times the mothers were breastfeeding. Only three children were being breastfed 7-12 times in a day. 2 children were being fed between 3-8 times. Apart from the children who were breastfed, 3 children were fed other milks and one child was getting tea.

12-24 months :

4/7 were breastfed. 3 children were fed 7-12 times in a day. One was fed 3-4 times a day. Out of these four, one was given only breast milk, and three were mixed fed. 6 children were getting other milks and tea. The amount of other milk given ranged from 4 oz to 12 oz /day. Only one child was getting three cups in a day.

7 out of 10 children were given milk in a bottle and 3/10 were fed by a cup.

Consumption of soft foods(variety/frequency/amount)

6-11 months:

5/7 children were getting soft foods. The frequency of feeding varied between 1-5 times in a day.

The amount of food children were getting was not adequate. 3/5 children were getting ½ pao per day. One was getting 1 pao, and only one child was getting 2 pao.

12-24 Months:

6/7 children were being given soft foods. 4 were fed 1-2 times in a day. One was fed 4 times a day, and one was fed 6 times a day. There were only two children who got 1½ -2 pao of food. 5 were getting less than 1 pao. The amount of food given was not adequate.

In both age groups, the foods given were: 6/14 got a banana, 5/14 got khichri, 6/14 biscuits. Only 4 children got roti in very small amounts, ranging from 1/8 roti to 1/2 a roti. Only 2/14 children were getting meat, and 3/14 children got a snack. Only one child was given daal. Only three children were getting foods rich in vitamin C. All of them got vitamin A through cooking oil.

Calories

6-9 months ideal calories = 880:

4/6 were getting less than 880. 2/6 were getting adequate calories.

10-12 months ideal calories = 1030:

1/1 child got less than the required (682 calories only).

12-24 months ideal calories = 1300:

0/7 children got 1300 calories. 4/7 of them were getting 520-700 calories.

3/7 were getting calories between 700-1100

Initial Reactions of mothers to the recommendations are given below: (TIPS-II)

Problem 1: Mother is not replacing the water that the child is losing through the diarrhea.

1a. Give at least 1/2 cup of ORS for each loose stool. If child needs more give him/her more ORS:

Positive Responses:

- I know how to make ORS. I have been making it before so that the water loss of the child can be made up and the child does not become weak and slow.
- I will do this. I will do so because the loose motions should stop and there should be no dehydration. There is no need to consult anyone; I will do it myself. I have been making it before it is not difficult.
- It is easy, I will do as you are saying. I can do so and will try. [Punjab] [urban]
- Will try to feed ORS after every bowel movement.
- I did not know that I should give more of Nimkol water. Now I will feed it. [Sindh] [urban]
- I will purchase the ORS from the shop and will give it. I will heat the water then cool it and mix ORS and give it to the child; will give half a cup and if asks for more will give more. You have advised us well about ORS. [Balochistan]
- I have not made it myself so far nor have I given it to the children. Next time during diarrhea I will give ORS so that the lost salts and water are replenished.
- I will immediately give ORS because my child is thirsty and has loose motions. [NWFP]

Negative Responses:

None

1b. Use a cup and spoon or just a cup to feed ORS to child.

Positive Response:

- I used to use the cup before; also it is easier to clean, there is no need of advice [urban]
- Before even I used a cup, there is no need for consultation. There is less danger of germs in a cup [urban]
- it is easy to feed in a cup, and will try to give it [Punjab]
- will use cup and spoon [urban]
- will give it in a cup with spoon [urban]
- will do so [Sindh]
- will give Nimkol in a spoon and cup and will take special steps for cleanliness
- my child can drink from a cup. The doctor gave me ORS; I have yet to make it. Now I will give it [NWFP]
- no response [Balochistan]

Negative Responses:

None

1c. Buy ORS at the pharmacy and keep some extra in case the diarrhea returns.**Positive Response:**

- will buy it from a medical store because it is already prepared and all ingredients are in proper quantity; there is no need to consult [urban]
- I will bring it and give it; there is no need to consult. If there is an emergency, will make it at home [Punjab]
- we buy ORS from the bazaar [urban]
- I already have a packet of ORS [Sindh]
- I can buy it
- I will ask and they will bring it [Sindh]
- no response [Balochistan]

Negative Response:

- If there is money, I will buy it [Punjab]

1d. Make sugar-salt solution (SSS) at home with clean water and salt. I can show you how to make it.**Positive Responses:**

- I will buy it from a shop, I will buy more and make it and give it to the child
- I will ask my father-in-law to buy it today and I will keep it [NWFP]
- I know how I have been making it; there is no need to consult
- I have been making it; there is no need to consult
- I can do so. I will make it myself once and I will learn at the same time [Punjab] [urban]
- I can now make ORS at home [urban]
- I can now make ORS at home [urban]
- I can make it [urban]
- I can easily purchase it [Sindh]
- We can make it at home too now quickly. Show me how to do so - I want to give it to

the child. There is no sugar, my mother-in-law has locked it now, but when she comes, I will make it. Please give me the salt quantity, thank you [NWFP]

Negative Responses :

- You will make ORS for me now, but when you go away, how will I make it? [NWFP]

1e. Continue breastfeeding and more frequently than before.

Positive Responses:

- I have already increased the quantity of my breast milk [urban]
- I have only breastfed [urban]
- child is consuming breast milk frequently
- now I will increase the quantity of breastfeeding [Sindh]
- I will continue breast milk during diarrhea
- I am already breastfeeding, whenever the child demands it [NWFP]
- no response [Punjab]
- no response [Balochistan]

Negative Responses:

None

Options mothers were willing to try, constraints, and motivations

The most popular recommendations to replace water loss were:

Giving half cup of ORS after each stool and using cup or spoon to feed ORS. 9/11 mothers agreed to try the recommendation, but only seven tried and six of which said that they would continue. 3/10 agreed and tried the recommendation.

Mothers who agreed to try but did not said that the child's diarrhea had stopped, so she did not follow the recommendation.

Positive motivations for using ORS were:

- “The cure was done within the household and no doctor or money were involved.”
- “I was tired of medication and child recovered from ORS.”
- “The child was able to drink ORS easily with a spoon and cup.”

Segment: Mothers of Children with Diarrhea, 6 - 24 Months Old

Problem- 1 : Mothers are not replacing the water that the child is losing through diarrhea:

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
1a. Give at least ½ cup of ORS for each loose stool. If child needs more give him/her more ORS:	11	10	1	9	7	7	0	2	6
1b. Use a cup and spoon or just a cup to feed ORS to child:	10	9	1-NR	5	3	3	0	2	3
1c. Buy ORS at the pharmacy and keep some extra in case the diarrhea returns:	10	9	1	1	1	1	0	0	1
1d. Make sugar-salt solution (SSS) at home with clean water and salt. I can show you how to make it:	10	9	1-NR	2	2	2	0	0	1
1e. Continue breast-feeding and more frequently then before:	8	7	1	3	3	3	0	0	2

Total number of cases to whom this problem was identified = 11 (8R+3U)

Problem 2: Mothers believe that the child has a poor appetite and poor digestion. Therefore, less food is given.

6/14 children were identified with this problem. The following initial responses were given by mothers with whom these recommendations were shared.

2a. Feed a variety of foods, like foods from the 4 different food groups (especially fruits and vegetables like carrots, mango, spinach, pumpkin).

Positive Response:

- Yes, fruit comes daily and I cook vegetables, also I will definitely give my child these items.
- Yes I will try to make him eat so that his dietary needs are fulfilled; if vegetables like carrots and turnips come to the house I will try to feed the child. I will make carrot halwa or even raw carrots, there is no need to ask.
- I will cook carrots in milk or ghee and feed it to the children; there is no need to consult [Punjab] [urban]
- I will try [Sindh] [urban]
- Child does not eat fruit, this is difficult but I will try. I will try to feed spinach and meat. He does not eat apples now, I will try bananas. [NWFP]

Negative Response:

None

2b. Give smaller servings of foods, but more frequently and at least 6 times a day.

Positive Responses:

- I try to do that already now I will do it more [Sindh] [urban]
- Yes I will try to increase the number of times I feed my child, she will become healthy and I do not need any one's advice on this either.
- I will increase the quantity of food. At first due to diarrhea, I was giving very little but now I will give more so that the child can recover from the weakness caused by the diarrhea. I will give in small quantities but many times, e.g., if the child is not eating I will feed it one or two spoons, at least and after a little while I will feed banana or some other fruit. I will inform his father.
- I do feed, but child does not eat; only eats in the morning or evening, otherwise throws it out of his mouth. There is no need to consult now. [Punjab] [urban]
- I will now try to feed it many more times so that my child is healthy and no disease can attack her. [NWFP]

Negative Responses

None

2c. Serve food that have the thickness of *firni* rather than thin, watery foods.

Positive Responses:

- I will mix rusk in milk and feed it; will also give carrot halwa so that I do not have to feed milk many times. There is no need to consult.
- I will try to make kheer, firni, and halwa. [Punjab] [urban]
- I will start today; with banana, will make firni and sugar water so that my child becomes

- healthy. [NWFP]
- I will try [Sindh]
- No response [Balochistan]

Negative Response:

- The child does not like thick food [Sindh] urban]

2d. Add one tablespoon of oil or ghee to a serving of food.

Positive Responses:

- Yes I can do this easily. I will make khichri in oil and will feed paratha. I do all my chores myself that is why I do not need to ask anyone, I look after the child myself.
- This has never happened before, I will do it now so that there is interesting food for the child and he eats more; there is no need to consult with anyone.
- I will separate the food and put extra oil in it there is no need to take permission from anyone. [Punjab] [urban]
- No response [Balochistan]
- Now I will include oil in the child's food. I will now make roti in ghee, he likes it. [NWFP]

Negative Response:

None

2e. Feed your child his favorite foods.

Positive Response:

- Yes the items he likes I will give so that the child is not hungry; there is no need to consult with anyone on this.
- I will try to do that so that the diet of the child improves [Punjab] [urban]
- I will try to feed those foods. [Sindh] [urban]
- The child likes imlok and carrots, I will give these. [NWFP]
- No response [Balochistan]

Negative Response:

None

2f. If your child does not want to eat regular food, then serve child some mashed soft foods.

Positive Response:

- I will give soft foods like banana, kheer, etc. so that the child can digest it.
- I will try; I used to do that before [Punjab] [urban]
- I will give soft food. The child's stomach is loose, I will give khichri and firni [NWFP]
- No response [Sindh]

Negative Response:

- due to shortage of time it is not possible to do so [Sindh] [urban]

Options mothers were most willing to try, constraints, and motivations:

The most popular recommendation was to feed a variety of foods to the child, 3/6 mothers tried the recommendation. Mothers gave banana, apple, potato and squashes. Mothers also gave carrots and turnips.

The positive motivations were "the girl is healthy, and likes to eat now," "These items are easily available and can be given easily."

Two mothers followed the recommendation of giving the child thick food such as firni. The positive recommendations were that "child can digest food easily," "Mother liked it as it was easy and nothing was more difficult for her."

2/5 mothers added oil to the food. One made choori and another made suji-halwa. The positive reactions were that by adding more oil/ghee, the child likes the taste and was "happy," "Child gained weight and his stomach was full."

1 of the 5 mothers gave a smaller serving of food and one mother agreed to feed the child his/her favorite food. None of the mothers agreed to follow the advice of giving soft/mashed foods to child.

Problem- 2 : Mothers believe that the child has a poor appetite and poor digestion. They therefore give less food.

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
2a. Feed variety of foods, like foods from the 4 different food groups (especially fruits and vegetables like carrots, mango, spinach, pumpkin):	6	6	0	4	3	3	0	1	3
2b. Give smaller servings of foods, but more frequently and at least 6 times a day:	5	5	0	2	1	1	0	1	2
2c. Serve food that have the thickness of <i>firmi</i> rather than thin, watery foods:	5	4	1	2	2	2	0	0	2
2d. Add one tablespoon of oil or ghee to a serving of food:	5	4	1	2	2	2	0	0	2
2e. Feed your child their favorite foods:	4	3	1-NR	1	1	1	0	0	1
2f. If your child doesn't want to eat regular food, serve child some mashed, soft foods:	4	3	1	0	0	0	0	0	0

Total number of cases to whom this problem was identified = 6 (3R+3U)

Problem 3: Mother did not practice proper hygiene.

6/14 mothers were identified with this problem. Initial responses to the three recommendations are given below:

3a. Wash your hands before preparing food, serving food, and after using toilet:

Positive Reactions:

- I will take care of cleanliness, I will especially wash hands with soap before doing anything.
- We always wash hands before eating and wash hands after the toilet [Punjab] [urban]
- I will especially take note of cleanliness.
- I do so now, I will pay special heed. [Sindh]
- Yes I will do so. I myself realize it but we are not very sensitive about our children - we do not give them attention because we are busy in our jobs. [NWFP]

Negative Reactions:

None

3b. Only use clean utensils and plates for food or drink.

Positive Reactions:

- Alright I will now give full attention to the cleanliness of the utensils and will wash them before using.
- I am not a child, I can do it when the soap is next to the tap, so I can use it to wash my hands [Punjab] [urban]
- I will do it.
- I can do this also [Sindh]
- Yes I will keep the utensils clean and also use clean food [NWFP]

3c. Switch from a bottle to a cup or spoon for feeding food or drink.

Positive Reactions:

- The child can drink from a cup; flies sit on the bottle and it also falls on the ground and there is no need I will not give it [Punjab]
- I do not give the child a bottle [NWFP]
- If it is for the benefit of the child, I will try not to give the bottle [Sindh]

3d. Discontinue the teether and soother.

Positive Reactions:

None

Options others were most willing to try /motivations and constraints:

The recommendation for washing your hands before preparing food, serving food, and after

using toilet was given to 6/14 mothers. Among these 6, only 4 agreed and actually tried. Positive motivations were that "child's health has improved and he is recovering from diarrhea", "cleanliness a good thing", "Liked it; when I observe cleanliness, the children will follow me".

5/6 mothers agreed and actually tried and agreed to continue the recommendation to use clean utensils and plates for food or drink. The positive reactions were "Saafai Nisif Imaan Hai" "Cleanliness is good for health" and "if utensils are clean the child would not get sick".

3/5 Mothers agreed and tried the recommendation from switching from bottle to a cup for feeding. Positive motivations were "It's difficult to keep the bottle clean", and "it's easier to keep the cup clean." One constraint a mother identified was that the child makes his clothes dirty using a cup. One mother said that she followed the recommendation but did not stop the bottle-feeding, as child will take time to adjust completely without a bottle.

Problem- 3 Mothers are not using proper hygiene:

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
3a. Wash your hands before preparing food, serving food and after using toilet:	6	5	1-NR	4	4	4	0	0	4
3b. Use only clean utensils and plates for food or drink:	6	6	0	5	5	5	0	0	5
3c. Switch from a bottle to a cup or spoon for feeding food or drink:	5	5	0	4	3	3	1	1	3

Total number of cases to whom this problem was identified = 6 (5R+1U)

Problem 4: Mother is not feeding enough quantity of food to child or giving in small amount or not giving at all.

4a. Feed the semi-solids at least three times daily:

Positive Responses:

Punjab:

- I can do it but child is too young now. Will feed him as much as he can eat easily.

Sindh:

- Will feed child at least three times a day.

- Will feed child thrice daily and will give banana, khichri, firni to child. I've started giving these semi-solids for the past few days. I think child's health is improving now.

Negative Responses:

Sindh:

- Child doesn't have teeth, how can he eat?

4b. Increase the amount of 6-9 month old child's feeding to ½ pao. Feed this amount 2 or 3 times daily.

Positive Responses:

Sindh:

- I haven't started feeding semi-solids to child yet, but I'll start soon.

- Initially, I'll feed child the amount he can easily eat and gradually when he grows, I'll increase the diet.

Negative Response:

None

4c. Brestfeed the child 6-8 times daily. Give semi-solids between breastfeeds.

Positive Responses:

Sindh:

- Child is too young now, I only breastfeed but will introduce semi-solids soon.

- Ok, I'll try to feed semi-solids to child.

Negative:

None

4d. Set a meal time for child and try to feed the child along with the family.

Positive:

Sindh:

- This is alright and I surely will try to act on it.

- Yes, I'll feed the child along with me so I can give him more time.

Negative :

None

4e. Give the child the same food cooked for the whole family. If spicy add mashed potato, yogurt, rice, or milk.

Positive:

Punjab:

- Yes, why not? I'll add yogurt, milk, or mashed potatoes in spicy foods and also try to feed

him from spoons.

Sindh:

- I can feed child whatever is cooked for the rest of the family and if spicy I can add yogurt or something else in it.
- Ok, I'll try this also.

Negative:

Sindh:

- Child is too young now.

4f. Make food thick like "firni".

Positive:

Punjab:

- I can feed khichri and kheer to child. It's not that difficult only I have to take out some time for this.

Sindh:

- It's alright, I will do so.

Negative:

Sindh:

- Child can not eat thick food.
- This seems difficult to me.

4g. Add some oil, butter, or ghee to child's meal. (At least one teaspoon in every meal).

Positive:

Punjab:

- I'll surely do this, as it will give more energy to child and child will be healthier.

Sindh:

- Ok, I'll do so.
- Child hasn't started yet but I'll try.

Negative:

None

4h. Make some special food like 'khichri' for child.

Positive:

Sindh:

- Will give semi-solids to child like khichri, I'll do so.
- I already feed khichri to child and add some butter in it.

Negative:

None

Options mothers were willing to try and /motivations and constraints

4 mothers were identified who were not giving enough quantity of food to the child during diarrhea. There were 8 recommendations that were shared with the mothers. Each mother chose different recommendation to suit to her convenience.

Positive motivations for feeding solids were:

- "It's easy and not a burden for her daily work."
- "It was easy to feed a banana."

One mother who agreed and did not try said: she "cannot feed the child 3 times because his stomach is small."

Positive motivations for giving the child firni were:
"I do not find it difficult to make khichri."

Problem- 4 : Mothers are not feeding enough quantity of food to child, not feeding often enough, or not giving at all

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
4a. Feed the semi-solids at least three times daily:	4	3	1	2	1	1	0	1	1
4b. Increase the amount of 6-9 months child's feed to ½ pao. Feed this amount 2 or 3 daily:	2	2	0	0	0	0	0	0	0
4c. Breastfeed the child 6-8 times daily. Give semi-solids between breast-feeds:	3	3	0	1	1	1	0	0	1
4d. Set a meal time for child and try to feed the child along with the family:	3	3	0	1	1	1	0	0	1
4e. Give the child the same food cooked for the whole family. If spicy, add mashed potato, yogurt, rice, or milk:	4	4	3	1	1	1	1	0	1
4f. Make food thick like "firni."	4	2	2	2	2	2	0	0	2
4g. Add some oil, butter or ghee to child's meal. (At least one teaspoon at every meal):	3	3	0	1	1	1	0	0	1
4h. Make some special food like 'khichri' for child.	2	2	0	0	0	0	0	0	0

Total number of cases to whom this problem was identified = 4 (3R+1U)

Problem 5: Mother is not exclusively breastfeeding, or not breastfeeding frequently enough or not breastfeeding at all.

2 out of 2 mothers were given this recommendation.

5a. Breastfeed more frequently, at least 8-10 times in a day and night.

Positive Reactions:

- no response [Balochistan]
- no response [Punjab]
- no response [NWFP]
- drinks at least 10-12 times during the night. I will stop all extra milk, and I will breastfeed more [Sindh]

Negative Response:

None

5b. Switch from a bottle to a cup and spoon.

Positive Reactions:

- no response [Balochistan]
- no response [Punjab]
- no response [NWFP]
- I will try. [Sindh]

Negative Response:

None

5c. Only breastfeed and stop feeding from bottle.

Positive Reactions:

- no response [Balochistan]
- no response [Punjab]
- no response [NWFP]
- I will try now that I know the disadvantages of a bottle.
- I will try not to give the bottle [Sindh]

Negative Response:

None

Options mothers tried/ motivations and constraints

The idea of breastfeeding more frequently was not well received by the mothers. Those who did respond gave a negative response:

"Child got diarrhea by taking more milk."

"Child will take some time to stop bottle feeding and also it is very tiring to feed the child with spoons."

Problem- 5 : Mothers are not exclusively breastfeeding, not breastfeeding frequently enough, or not breastfeeding at all:

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
5a. Breastfeed more frequently, at least 8-10 times in a day and night:	2	2	0	1	1	0	1	0	0
5b. Switch from a bottle to a cup and spoon:	2	2	0	1	1	0	1	0	0
5c. Only breastfeed and stop feeding from bottle:	2	2	0	1	1	0	1	0	0

Total number of cases to whom this problem was identified = 2 (2R+0U)

Problem 6: The community, family, and mother thinks that diarrhea is caused by “nazar,” “saya,” and heat, etc., and the child will not get better on doctor’s advice.

6a. Diarrhea is actually caused by germs that get in food and in fluids.

Positive Reaction:

- no response [Punjab]
- no response [NWFP]
- It is true that diarrhea is caused by flies [Balochistan]
- We think that diarrhea is caused by weather, heat, and cold and falling off the bed. I understand a little bit better now. [Sindh]

6b. Give breast milk more frequently.

Positive Reactions:

- no response [Punjab]
- no response [Balochistan]
- no response [NWFP]
- I will increase buffalo milk (does not breastfeed)
- Child takes a feed 10-12 times at night
- I can even do that [Sindh]

6c. Feed ORS and SSS in addition to breast milk.

Positive Reactions:

- no response [Punjab]
- no response [Balochistan]
- no response [NWFP]
- Four of my children have already died due to diarrhea; all 4 did not pass urine and their lips were dry and then they died. If I knew, I would have tried earlier and would have practiced cleanliness; I would not have used the bottle and would have protected them from flies, and would have given Nimkol. I am pained to think they died because of diarrhea.
- Now I will do so. ORS will benefit the child.
- I will try to make and give ORS. [Sindh]

Problem- 6 : Mothers, the community, and families think that diarrhea is caused by “nazar,” “saya” and heat and will not get better on doctor’s advice:

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
6a. Diarrhea is actually caused by germs that get in food and in water and other fluids:	2	2	0	0	0	0	0	0	0
6b. Give breast milk more frequently:	2	1	1	0	0	0	0	0	0
6c. Feed ORS and SSS in addition to breast milk:	2	2	1	1	1	1	0	0	1

Total number of cases to whom this problem was identified = 2 (2R+0U)

Problem 7: Breastfeeding is stopped or decreased during diarrhea, as mother's milk is considered to increase the diarrhea.

7a. Continue breastfeeding with increased frequency.

Positive Reactions:

- I will increase the number of times I breastfeed because you have told us. [Balochistan]
- no response [Punjab]
- no response [Sindh]
- no response [NWFP]

Negative Reaction:

None

7b. Breastfeed after every stool.

Positive Reactions:

- no response [Punjab]
- no response [Sindh]
- no response [Balochistan]
- no response [NWFP]

7c. Avoid giving medicines for non-bloody diarrhea.

- no response [Punjab]
- no response [Sindh]
- no response [NWFP]
- No bleeding in bowel, but I will stop giving medicine to the child. [Balochistan]

7d. Increase the food and fluids you eat so that you can produce a large amount of milk.

- no response [Punjab]
- no response [Sindh]
- no response [NWFP]
- I did not have a roti at night before but now I will begin to have, so that the quantity of milk increases. [Balochistan]

Problem- 7 : Mothers stop or decrease breastfeeding during diarrhea, as mother's milk is considered to increase the diarrhea:

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
7a. Continue breastfeeding with increased frequency:	1	1	0	1	1	1	0	0	1
7b. Breastfeed after every stool:	0	0	0	0	0	0	0	0	0
7c. Avoid giving medicines for non-bloody diarrhea:	1	1	0	1	1	1	0	0	1
7d. Increase the food and fluids you eat so that you can produce a large amount of milk:	1	1	0	1	1	1	0	0	1

Total number of cases to whom this problem was identified = 1 (1R+0U)

(0-5 Months) Child Recovering from Illness

Ideal Practice: Increase frequency of breastfeeding during recovery.

Dietary Analysis in TIPS-I:

Trials were carried out with mothers of 11 children who were recovering from different diseases/illness. Out of these 11 children, only 9 were breastfed (2/9 were exclusively breastfed). Most (7/9) of them were getting both breast milk and other milk, and 2 were bottle-fed.

In TIPS-I, 2/9 were breastfed 5-times a day, 2/9 were breastfed 8 times a day, 3/9 were breastfed 10 times a day, and there was only one mother breastfeeding the child 13 times and another feeding 15 times in a day. There was a lot of variation in the frequency and nearly all mothers were feeding less than the desired amount which was 16 times in a day (8 day and 8 night).

The children were getting calories as low as 416 calories in a day. 7/11 were getting calories between 500-550. Only 3 were getting 650, 750, and 890 calories.

6/11 children were getting additional liquids and other milk. 5/6 were getting other milk (buffalo milk), but only one was getting milk with tea. The amount of other milk fed ranges from ½ pao to 1 pao in a day. Only two children who were exclusively bottle-fed were getting 40-oz in a day. All of these 6 children were bottle-fed (no one was fed from a cup).

4/11 were fed semi-solids once a day, in amounts ranging from 2-4 tablespoons. Foods being fed were sagu-dana, qaawa, and Cerelac.

10/11 children were getting vitamin A from milk (breast milk or other milk); 1/11 were getting vitamin C (from Cerelac), and only one was getting iron in very small amounts (from Cerelac).

Dietary Analysis in TIPS-III

Even after the household trials, the same number of children were being breastfed, but an improvement was that mothers had increased the frequency of breastfeeding. Now 4/9 were breastfeeding their child 9 times a day, 2/9 were feeding 10 times, 1/9 was feeding 11 times, and 2 mothers started feeding up to 14 times a day.

The mothers who were breastfeeding only 5 times a day have increased the frequency to 8 and 9 times a day. The increased frequency of breastfeeding (in all cases) resulted as increased caloric intake. 5/11 were getting 500-550 calories, 2 were getting about 600 calories, 3 were getting about 700 calories, and one getting more than 800 calories.

4/11 children were getting additional milk (from any source) in TIPS-III. The mother who was giving tea had stopped giving tea in TIPS-III. All 4 were giving the milk by bottle. The amount of other milk fed ranges from ½ pao to 1 pao in a day, and only two children, which were exclusively being bottle-fed, were getting about 50-oz in a day.

More mothers have started giving semi-solids in TIPS-III. Now 5/11 were fed semi-solids. Only one was fed once a day, 2/5 were fed twice daily, and 2/5 were fed 3 times a day. The amount not only increased from 1/4 pao to 1/2 pao, but also there was a variety in foods being fed which included bananas, rusk, sagu-dana, qaawa, Cerelac, khichri, and potato.

10/11 children were getting vitamin A (from breast milk or other milk), 1/11 were getting vitamin C (from Cerelac), and only one was getting iron in a very small amount (from Cerelac).

Major feeding problems identified in this age group were:

Problem 1: Mother is not exclusively breastfeeding, or not breastfeeding frequently enough or not breastfeeding at all:

Problem 2: Mother doesn't use proper hygiene practices:

Problem 3: The community, family and mother think that diarrhea is caused by "nazar," "saya," and heat, etc.

Initial Responses against the recommendations:

Initial Responses against the recommendations given in TIPS-II are as follows:

Problem 1: Mother is not exclusively breastfeeding, or not breastfeeding frequently enough or not breastfeeding at all.

1a: Breastfeed more frequently, 10-11 times day and night.

Positive Responses:

Punjab :

- I have told you that I will try to increase the frequency of breastfeeding and I will bottle-feed less frequently.

Sindh :

- I was already breastfeeding 8-9 times, but now I'll increase the duration and feed for 20-25 minutes.

NWFP :

- I will increase the frequency of breastfeeding so that more breast milk will be produced.

Urban :

- I already practice this, but now I will increase frequency. My girl has recovered because of frequent breastfeeding and if I continue breastfeeding like that, she will gain weight.

- All right, I will increase the number of times I breastfeed

Negative Responses:

Urban :

- I am scared. [urban][Sindh]

1b: Switch from bottle feeding to giving milk by cup and spoon.

Positive Responses:

Balochistan :

- I will try to feed the baby from a cup.

Punjab :

-I will try to feed the child with a spoon and a cup. I do not have to ask anyone - my husband himself tells me that I do not clean the bottle properly.

Sindh :

-Instead of the bottle-feeding, I will give more in a cup and spoon.

NWFP :

- I do not give a bottle.

Urban :

-I do not bottle-feed. I was considering buying a bottle to give the child tea, but now I will give it with a cup and spoon. [urban]

Negative Responses:

None

1c. Only breastfeed the child and stop using bottle.

Positive Responses

Balochistan :

- I will try to breastfeed, only if the child accepts.

Punjab :

- I will try to breastfeed maximum times, and instead of bottle-feeding, I'll give milk in a cup so that my child will not get sick but regains health.

- I will only breastfeed the child.

Sindh :

- I will increase the frequency of breastfeeding. I'll stop bottle-feeding.

Urban :

- We are poor people and we cannot afford to buy a bottle of extra milk; I can only breastfeed. I will increase the number of times I breastfeed so that the child does not remain hungry. [NWFP]

Negative Responses:

None

Options mothers were most willing to try/motivations and constraints:

Problem- 1: Mother is not exclusively breastfeeding, or not breastfeeding frequently enough or not breastfeeding at all.

The problem was identified for 10 mothers whose children were 0-5 months old and recovering from illness.

1a. Breastfeed more frequently, 10-12 times a day and night.

All mothers were given this recommendation. 6/9 mothers (who initially gave positive response) agreed and tried this advice. Mothers who tried (6/6) and breastfed the child more often, gave positive responses saying "Child does not cry now and sleeps easily," "Child is fed more in this way", "Child does not disturb now and is playful now," "Also have increased the duration of breastfeeding from 15-25 minutes," "Family is happy as child does not cry that much now and seems to be recovering." No negative responses were recorded.

Motivational statements given by mothers are:

- "I can breastfeed the child even while doing my routine household work."
- "Child is fed more in that way."
- "Child sleeps easily and is getting healthier."
- "Child digests breast milk easily and does not waste or throw up the milk."
- "More breast milk is produced now and I can feed the child more frequently."

1b. Switch from bottle-feeding to giving milk by cup and spoon.

7/10 mothers were given this recommendation, and they all gave initial positive responses. Only 3/7 mothers agreed and tried this advice. Although two of the mothers responded positively, their children did not take the milk from a cup or spoon, so one of the mother decided to continue bottle-feeding and the other continued breastfeeding the child (but stopped bottle-feeding). One mother who was about to start bottle-feeding changed her mind, saying "I was thinking about bottle-feeding the child but now I will not and will only breastfeed the child."

Motivational statements can be:

- "I don't have to buy a bottle and to care about the cleanliness of the bottle now."
- "I don't have to clean bottle repeatedly which was difficult."

1c. Only breastfeed the child and stop using a bottle.

8/10 mothers were given this advice. Only one of the eight mothers (who initially gave positive response) agreed and tried the recommendation. The response given by that mother was positive saying that she will continue trying to breastfeed exclusively, and she also said that it's to benefit her child and now she wouldn't have to clean the bottle repeatedly.

Segment: Mothers of Children Recovering from Illness, 0 - 5 Months Old

Problem- 1 : Mothers are not exclusively breastfeeding, or not breastfeeding frequently enough or not breastfeeding at all:

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
1a. Breastfeed more frequently, 10-12 times a day and night:	10	9	1	6	6	6	0	0	4
1b. Switch from bottle feeding to giving milk by cup and spoon:	7	7	0	3	3	2	1	0	2
1c. Only breastfeed the child and stop using bottle:	8	8	0	1	1	1	0	0	1

Total number of cases to whom this problem was identified = 10 (8R+2U)

Problem 2: Mother doesn't use proper hygiene practices.

2a. Wash your hands before preparing, serving food, and after using the toilet.

Positive Responses:

Punjab :

-Yes I will definitely wash my hands before cooking food and serving food

Sindh :

-After coming from the toilet and before cleaning child's bowl I wash hands with soap.

NWFP :

- I washed hands after going to the toilet but now I will do so with soap [NWFP]

Urban :

- I keep my hands clean all the time

- I will now wash my hands with soap and water after going to the toilet and before serving food [urban]

Negative Responses:

None

2b. Only use clean utensils and plates for food or drink.

Positive Responses:

Punjab :

-Yes, I will practice this too and will use clean utensils

Sindh :

- I will use clean utensils for food we wash our utensils in water and dry them in the sun

NWFP :

- I will take special care of cleanliness regarding child's feeding utensils

Urban :

- All right, I'll do.

- For food I use clean utensils rinsed again

Negative Responses:

None

2c. Do not use bottle to feed your child.

Positive Responses:

Punjab :

- Now I will not bottle feed but will use cup and spoon to feed milk [Punjab]

Sindh :

- I will not bottle-feed the child but feed him with spoon and cup

- I'm already feeding other children in a small glass I will do the same with this child [Sindh]

NWFP :

- I have not yet used the bottle on my child [NWFP]

Urban :

- It is difficult to feed milk with a spoon and cup but for other items I will use the cup [urban]

-I have only breastfed the child so far but I was considering to buy a bottle [urban]

2d. Discontinue the teether and soother.

Positive Responses:

Punjab :

- No response

Sindh :

- do not give soother, etc.

Urban :

- I do not give [urban]

- I used to give soother but will discontinue

- I do not give soother

- I did not know; I will remove the soother from the child and will not give it again so that the child remains healthy

Negative Responses:

None

Options mothers were most willing to try, motivations, and constraints:

Total of 9 mothers identified this problem with children recovering from illness. Following are the four recommendations given against this problem. The reactions and results of these recommendations are as following:

2a. Wash your hands before preparing, serving food, and after using the toilet:

9/9 mothers were given this recommendation, they all gave an initial positive reaction, but only 3/9 agreed and tried this recommendation. Mothers who acted on this advice say they cleaned their hands with soap before feeding, or before cooking meals. No one gave a negative response.

Motivational statements given by mothers were:

-"Cleanliness is part of our religion;"

-"We can avoid illnesses by observing cleanliness;" and

-"Cleanliness is necessary for health."

2b. Only use clean utensils and plates for food or drink:

9/9 mothers were given this advice. 8 mothers gave a positive response, but only one mother agreed and tried the advice. She separated the utensils for the child, and cleaned them before feeding anything to the child. Statement given by mother is:

"Child holds the clean utensil with interest, and will also not get sick by it."

2c. Do not use bottle to feed your child:

All 9 mothers were given this advice. 8/9 mothers gave positive response and only one gave a negative response. 7/9 mothers (who initially gave positive responses) agreed to try this recommendation. One mother did not actually try as her husband forbids her and said that child

would not eat enough by using spoon. The rest of the 6 mothers tried and gave **positive responses** saying "I breastfed the child whenever she cried and stopped bottle-feeding gradually," "fed the child with cup instead of bottle," "Initially child used to throw away what I tried to feed him, but now he's getting used to it." The **negative response** given by one mother was that she faced lots of problems feeding child with a spoon and she thinks that child is too young to be fed by spoon or cup.

Motivational statements given by mothers were:

- "Due to teether/feeder my daughter got ill and she cries a lot. Since I started breastfeeding she seems satisfied and sleeps more."

- "Previously, Cerelac was being wasted, but now child eats all of it when I feed him with spoon."

2d. Discontinue the teether and soother:

8/9 mothers were given this advice. Although all of them (8/8) gave initial positive reaction, only one agreed and tried the recommendation. Mother followed the advice by observing the cleanliness and by discontinuing giving teether to the child. As child was used to teether, he cried a lot and demanded teether.

Problem 2 : Mother doesn't uses the proper hygiene:

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
2a. Wash your hands before preparing, serving food, and after using the toilet:	9	9	0	3	3	3	0	0	3
2b.. Only use clean utensils and plates for food or drink:	9	8	1	1	1	1	0	0	1
2c. Do not use bottle to feed your child:	9	8	1	7	6	6	1	1	6
2d. Discontinue the teether and soother:	8	8	0	1	1	1	1	0	1

Total number of cases to whom this **Problem** was identified = 9 (7R+2U)

Problem 3: The community, family, and mother think that diarrhea is caused by “nazar,” “saya,” and heat, etc.

3a: Diarrhea is caused by germs/bacteria which get into food and in all fluids.

Positive Responses:

Balochistan :

- No response

Punjab :

- I did not get the “dum” done, therefore no relief; this is what his father also says that if you do not clean properly this will be the result. But now I will try to clean the bottle every time.

- I give milk and I need no one's permission.

Sindh :

- I clean my hands and try to keep utensils germ-free. I put them in the sun to dry and I will clean the child's hands and face with soap and mine too.

NWFP :

- No response

3b. Give more frequent feedings of breast milk

Positive Reactions:

Punjab :

- I do not have enough breast milk and my child remains hungry, but now you are saying that if I increase the number of times I feed I will get more milk. I will try.

Sindh :

- I will breastfeed more often whenever the child cries.

NWFP :

- I will breastfeed.

Negative Responses:

None

3c. Make and feed ORS (either from the store or made at home) in addition to breast milk

Positive Reactions:

Sindh :

- I will regularly breastfeed the child, and if necessary I will give ORS as well.

Negative Responses:

None

3d. Illness is not due to “nazar” or “saya.”

Positive Responses:

Punjab :

-I had "dum" administered so that there is some relief but now that you say so I will eat more roti and will try to increase the number of times I breastfeed. I feel hungry but now I will try to implement it and I will also drink milk.

Negative Responses:

None

Options mothers were most willing to try/motivations and constraints:

Total of 5 mothers were identified with the problem that mothers think diarrhea is caused by "nazar," "saya," and heat, etc. Following are the four recommendations given against this problem. The reactions and results of these recommendations are as follows:

3a: Diarrhea is caused by germs/bacteria which get into food and all fluids.

All 5 mothers who were given this recommendation gave positive initial reactions, but only one mother agreed and actually tried it. The mother who tried observed cleanliness for food, utensils, and also of child. Mother gave **positive response** saying "disease does not occur due to cleanliness".

Motivational statement given by mother was:

"I can save my child from diarrhea by observing cleanliness and he will be healthy."

3b. Give more frequent feedings of breast milk

All 5 mothers who were given this recommendation gave positive initial reaction, but only one mother agreed and actually tried it. The mother gave frequent breastfeeds to child and says that child does not cry now and she also feels lighter by breastfeeding frequently. The **negative reaction** given by the mother was that she "feels more hunger" now but this is in fact a positive reaction as a lactating mother should eat more than her routine diet. If the mother has increased the frequency of breastfeeding, she should eat more.

3c. Make and feed ORS (either from the store or made at home), in addition to breast milk

4/5 mothers who were given this recommendation gave positive initial reaction, but only one mother agreed and tried. The mother was only breastfeeding the child; although she has bought ORS packet, she says that she will give ORS only if the child got diarrhea.

Mother gave positive reaction saying that "By breastfeeding, child plays more and slept longer."

No negative response was given.

3d. Illness is not due to "nazar" or "saya.

4/5 mothers who were given this recommendation gave a positive initial reaction, but only one mother agreed and actually tried it. She started breastfeeding frequently and says that child doesn't cry that much now and is getting healthier. At the prospect of continuing this

recommendation, the mother says she will because it is good for her and for her child.

Motivational statements given were:

"Child digests breast milk easily, doesn't cry that much now and is getting healthier."

Problem- 3 : The community family and mother thinks that diarrhea is caused by “nazar,” “saya,” and heat, etc.

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
3a. Diarrhea is caused due to germs/bacteria which gets into food and in all fluids	5	5	0	1	1	1	0	0	1
3b. Give more frequent feedings of breast milk:	5	5	0	1	1	1	1	0	1
3c. Make and feed ORS (either from the store or made at home) in addition to breast milk	4	4	0	1	1	1	0	0	1
3d. Illness is not due to “nazar” or “saya”	4	4	0	1	1	1	0	0	1

Total Number of cases to whom this **Problem** was identified = 5 (5 rural)

(6-24 Months) Child Recovering from Illness

A total of 16 mothers of recovering child (whose ages range from 6-24 months) were interviewed.

Ideal practice: If your baby has diarrhea, in addition to breast milk and regular food, give soup, juices, or rice water. Look for signs of dehydration, and if any are seen, bring the child to a trained health worker.

Frequency of breastfeeding: 16 times, day and night

Semi-solids: If the child is unable to eat family foods, give soft foods 4-5 times a day.

Amount: Less than ½ pao 6 times a day.

Foods: Khichri, yogurt, mashed banana, mashed potato,

16 trials were carried out with mothers of children 6-24 months who were recovering from any kind of illness by that time. 4 children were in the 6-11 age group, whereas 12 were in the 12-24 month age group.

Diet Analysis of TIPS-I:

Breastfeeding/frequency of BF/other milk:

6-11 months :

Initial diet analysis for TIPS-I showed that 3 of 4 children were breastfed. The number of times the mothers breastfed was 4, 8, and 10 times per day. 1 of 4 was mixed feeding, being breastfed 4 times and other milk from bottle 4 times a day. 1 of 4 was fed other milk by bottle 4 times a day having amount of approximately 21 ounces.

12-24 months :

Only half (6/12) the number of children were breastfeeding. 4 children were fed 4-6 times in a day, one was fed 9 times and one was fed 12 times a day. Out of these six, 2 were given only breast milk, and four were mixed fed. 11 children were getting other milks and tea. The amount of other milk given ranged from 4 oz to 16 oz /day. Only one child was getting four cups of milk in a day. Among these 11 (who were fed other milks), 4 were fed only from bottle, 4 were fed from bottle and cup, and only 3 were fed exclusively from cup.

Consumption of soft foods (variety/frequency/amount)

6-11 months:

Only one among the four children of this age group was getting foods like banana and potato twice daily. The amount of food they were getting daily was about ½ pao. The amount of food children were getting was not adequate.

12-24 Months:

All of the children from this age-group were fed foods, mostly (5) twice a day. 4 were fed 3-

4 times a day, only one being 6 times and one as many as 7 times a day. 6/12 were getting less than a pao, and 5/12 children were getting 1½ -2 pao of food. Only one was getting about 3 pao of food. The amount of food given was not adequate.

In both age groups, the foods being given were: 7/16 roti, 6/16 banana, 7/16 khichri, 6/16 biscuits, 3/16 potato, 2/16 egg, 2/16 butter. Only 2/16 children were getting meat. Only one child was given oranges, and spinach was fed to another child.

Only four children were getting foods rich in vitamin C and three with foods enriched with iron. All of them got vitamin A through cooking oil (used in frying paratha, egg, or salan).

Calories

Caloric need of child 6-9 months = 880:

The only child falling into this category was taking about 480 calories per day. Which is about half of what is actually required.

Caloric need of child 10-12 months = 1030:

All of the 7 children falling in this category got less than the required calories. One child is getting as low as 450 calories, 2 are getting calories between 600-700, while 2 children are getting between 750-850, and only one is getting 964 calories in a day.

Caloric need of child 12-24 months =1300 :

The caloric intake of the 8 children falling into this category was even worse than the previous category. 3/8 were getting calories between 500-550, 3/8 were getting 700-800, one was getting 882, and one was getting 927 calories per day. This is too low for a child recovering from illness.

Diet Analysis of TIPS-III:

Breastfeeding/Frequency of BF/other milk:

6-11 months :

Diet analysis for TIPS-III showed that 2/4 children were exclusively breastfed and the frequency of breastfeeding remains unchanged at 8 and 10 times per day. 1 was mixed fed, being breastfed 4 times and other milk from bottle 4 times a day. 1 child was fed other milk by bottle 4 times a day having amount of approx. 21 ounces.

12-24 months :

Even after the trials, the number of children being breastfed remains same at 6/12. The frequency has increased, now 5 children were fed 6 times in a day, one was fed 8 times a day. Out of these six, 2 were exclusively being breastfed, four were mixed fed.

11 children were getting other milks and tea. The amount of other milk given ranged from 4 oz to 21 oz /day. Among these 11 (who were fed other milks), 4 were fed only from bottle, 4 were fed from bottle and cup, and only 3 were fed exclusively from cup.

Consumption of soft foods(Variety/Frequency/Amount)

6-11 months:

Previously only one child was fed food, but after trials, mother of other three also started giving foods. The amount of food fed to 3/4 children were about 1 pao, and one was fed about 1½ pao daily. Although foods were introduced to 3/4 children and one who was already taking has increased the amount, the amount was still not adequate.

12-24 Months:

Small changes in frequency were observed in the second 24-hour recall. After acting on recommendations, 5 children were fed thrice daily, 4 were fed 4-5 times a day, only one being 6 times and one 7 times a day. There is a change in increase in amount fed to child as 10/12 children were now given 1-2 pao of food. One was getting about 2 pao and one was fed about 3 pao of foods. Although there was some minor increase in frequency as well as in terms of amount fed, it is still not up to ideal behavior.

In both age groups the foods given were: Children were fed foods like roti (10), biscuits (5), bananas (5), potato (4), rice (3), meat (3), butter (2), egg (2). Other foods given are firmi, suji, apple, orange, cabbage, rusk, and Farex.

All children were getting vitamin A from some sources. 11 children were getting foods rich in vitamin C and eight with foods enriched with iron.

Calories

Caloric need of child 6-9 months = 880:

The only child falling into this category has started taking about 950 calories per day. The calories are almost doubled and he is now taking sufficient amount and in good proportion.

Caloric need of child 10-12 months = 1030:

Among the 7 children falling in this category, one child is getting as low as 400 calories, one is getting about 600 calories, 3 are getting calories between 750-850. Two of the children started taking adequate amount of calories (1000 and 1230).

Caloric need of child 12-24 months =1300:

Among 8 children falling in this category, 2/8 were getting calories between 500-650, 3/8 were getting 700-800, 3 were getting about 1000-1100 calories per day. Although improved from TIPS-I, it is still low for a child recovering from illness.

Problems Identified:

The problems identified were as follows:

Problem 1: Mothers are not giving complementary foods or giving too little or not frequently enough.

All mothers (16/16) were identified with this problem.

Problem 2: Mothers do not increase the amount of food baby eats when he/she is recovering from illness.

Thirteen of 16 mothers were identified this problem.

Initial Responses to this Recommendation:

The initial responses to these problems identified in TIPS-II (and regarding each recommendation given) are as follows:

Problem 1: Mothers are not giving complementary foods or giving too little or not frequently enough.

1a. Feed your child at least 3 times daily

Punjab:

- I will give my child milk and also will mix rice and Farex in milk and feed the child.
- I will give my child banana, potato, and yogurt and will also increase his diet.
- Yes, I will try and will also give rice, potato, and khichri.
- Yes, I will so that his appetite is reduced and he doesn't irritate me.
- I will feed the child three times a day and will also give tea and biscuits in the morning, roti and butter in the afternoon, milk and rice at night and if there is something else I will also feed him.

NWFP:

- Yes, I will try to feed him more often and will give him food three times a day.
- I will give attention to my child's diet.
- Now, I just breastfeed the child, but I will start giving my child other foods too.

Sindh:

- I will do so.

Urban:

- I will feed the child three times a day, whenever we take our meal I will also feed the child.
- I am already doing this.

Negative Responses:

Punjab:

- I have tried so hard but the child would not eat.

1b. Increase the serving size of child of 6 months to ½ pao. Give this ½ pao serving thrice daily.

Positive Responses:

Punjab:

- I will increase my child's diet.
- Yes, I can do this.

NWFP:

- I will try to increase the diet gradually to ½ pao.
- I will feed the child with something after short intervals so that his stomach remains full.
- If the child can't eat more food, I will give him in little quantities so that he gets used to it.

Sindh:

- I will increase the amount.
- I will do this.

Urban:

- I already feed the child three times, now I will try to feed him more.
- I will try.

Negative Responses:

None

1c. Have a set meal time for child (same as the family).

Positive Responses:

Punjab:

- I can do this.
- I will try my best.
- I will make him sit and eat with us.
- We all eat together, will try to make him eat more.
- Now I will try to make the child eat with the family.
- I can do.
- We make the children eat with elders.
- It is possible so I will try.

NWFP:

- I will try to make him sit with us and eat so that he develops a habit.
- I will try to make the child sit with us and eat.

Sindh:

- I will try.
- Now I will make sure to make the child sit with us.

Urban:

- I will try.

Negative Responses:

None

1d. Feed the child the same foods as the family. If food is spicy, add yogurt, potato or milk.

Positive Responses:

Balochistan:

- I will mix rice, potato and yogurt in the curry for the child.

Punjab:

- OK, I will boil potatoes and rice and will feed the child after mashing it.
- Yes, it is possible as these things are already cooked at our home so I can feed the child.
- I will act on the recommendation.
- It is possible so I will give the child food mixed in milk and yogurt.
- It is good and easy so I will give the child whatever is cooked.
- Whatever I eat I will also give it to the child.
- If food is spicy I will put yogurt for the child.

- Yes, I can do.

NWFP:

- It's easy, I will put rice, milk, potato, or yogurt in the curry and will give to the child.

- OK, I will try to make the child sit with us and eat.

Sindh:

- I will make separately for the child, it is not that difficult.

- It is easier, and I will do this.

Urban:

- I will mix rice and yogurt in whatever is cooked at home and feed the child.

- I will make the child eat with the family.

Negative Responses:

None

1e. Make child's diet thick like "firni."

Positive Responses:

Punjab:

- I will do.

- Now, I will do.

- It is not difficult; I will make him eat.

- I will make thick food.

- I will try to make the food thick for the child.

NWFP:

- Now child eats happily so I will give.

- OK, I will give soft foods to the child.

Sindh:

- It is possible for me.

- OK, I will do this.

Urban:

- I will make the food thick and tasty so that the child can eat.

1f. Add some oil/ butter or ghee to child's food. (1 teaspoon per meal).

Positive Responses:

Balochistan:

- I will definitely use ghee and oil in preparing the child's food.

Punjab:

- Ghee and butter is available at our home so can give easily.

- Of course I will as it's for my own benefit.

- OK, I will do.

- I will add ghee and oil in child's diet.

- I will add ghee in child's diet.

NWFP:

- As the child's chest is infected so can't act now but I will in the future.

- I will make paratha, khichri, and halwa for the child so that she gets healthier.

Sindh:

- If the child does not get a cough, then I will give.
- Yes, I will do.

Negative Responses:

None

1g. Make some food specially for child like "khichri."

Positive Responses:

Balochistan:

- If there is anything at home that is more nutritious than the one from bazaar, then I will surely give to the child.

Punjab:

- Sometimes I can give tea and in other times banana and Farex.
- I will do that for the sake of my child's health.
- Yes, I can make khichri and feed the child.

NWFP:

- I will make khichri for the child, it is easier so that she gets healthy.
- I already make halwa for the child, now I will also make khichri.
- I will make khichri for my child.

Sindh:

- I will do like this, it is not difficult for me.
- I will try to do this.

Urban:

- I will try.

Negative Responses:

Punjab: It is very difficult.

Options mothers were most willing to try /Motivations and Constraints:

Problem 1 : Mothers are not giving complementary foods or giving too little or not frequently enough.

Problem 1 was identified in 16 children. Following are the eight recommendations given for this problem.

1a. Feed your child at least 3 times daily.

14/16 Mothers were given this recommendation. 9/13 mothers (who initially gave positive response) agreed and acted on this advice. 7/9 mothers have given **positive** statements regarding feeding the child 3 times a day saying "child eats happily when I make him sit and eat with us," "Child eats more now," "Child has developed the habit of eating more," "Child does not cry as much as he cried before."

Two mothers gave a **negative** response saying that they have "stopped giving third meal due to diarrhea."

Motivational statements given by some mothers are as:

"Child does not cry now, after eating enough food in 3 meals."

"Child has developed a habit of eating 3 times a day."

"Child will become stronger and healthier by eating more."

"Child will be healthier and active by eating more food."

1b. Increase the serving size of child of 6-9 months to ½ pao. Give this ½ pao serving thrice daily.

10/16 mothers were given this recommendation. 5/9 mothers (who initially gave positive response) agreed but only 4 have actually tried the recommendation. The mother who did not actually try says that her child has diarrhea and was not accepting anything and spits out anything given to her. 2 of 4 mothers who actually tried gave a **positive response** saying "Child seems more healthier and active than before." The other two mothers who tried it gave a **negative response** for this recommendation saying "Did not continue the practice due to indigestion." The constraint seems to be that mother thinks that "the advice was difficult to follow" but the reason was not defined.

1c. Breastfeed the child 6-8 times a day and feed semi-solids between breastfeeds.

8/16 mothers were advised. Only 2/6 mothers (who initially gave positive response) agreed and tried the recommendation. Both the mothers gave **positive responses** saying "child drank breast milk frequently and does not remain hungry." Other mothers fed semi-solids to child and the child liked it (suji, milk, and sugar), but the same mother gave a **negative response** saying that child does not like to be breastfed.

1d. Have a set meal time for feeding the child (same as the family).

13/16 mother were given this recommendation. Only 4/12 (who initially gave positive response) agreed and tried the advice. Most mothers started feeding the child themselves. All four of these mothers gave **positive response** saying "child has now developed a habit of eating," "Make child sit and eat with me."

1e. Feed the child the same foods as the family. If food is spicy, add yogurt, potato, or milk.

15/16 mothers were given this recommendation. 7/14 mothers (who initially gave positive response) agreed and actually tried the advice. All the mothers gave **positive responses**, with most of them saying "Child eats more while sitting with the family," "Don't have to cook specially for child," "Happy to see our child eating," "Child is active and healthy," "Child likes eating food with family." No one gave a negative response.

Motivational statements given by mothers were:

- "It is better for child's health if he eats with the family and eats more."
- "Child will be fed easily."
- "Can feel child's health improving."
- "Child eats more while eating with rest of the family."
- "Don't have to cook some special food for the child."
- "It saves time and child also gets used to it."

1f. Make child's diet thick like "firni."

11/16 mothers were given this recommendation. Only 2/10 mothers (who initially gave positive response) agreed and tried this recommendation. Mothers gave kheer, khichri, halwa. Both gave **positive** responses after actually trying the recommendation saying "Child will get more energy and will start eating more of everything," "now child can take thick food easily." No one has given a negative reaction.

1g. Add some oil/ butter or ghee to child's food. (1 teaspoon per meal)

12/16 mothers were given this recommendation. Only 6/11 mothers (who initially gave positive response) agreed but only 5 actually tried this recommendation. The one who agreed but did not try said "the child was suffering from flu and will act on advice when child recovers." 4 mothers gave **positive** responses after trying this recommendation saying "Made khichri with oil added to it," "I did not like too much oil in khichri, so I fed choori to child," "gave carrots and oil to child." No mother gave negative response after trying the recommendation.

1h. Make some food specially for child like "khichri."

12/16 mothers identified this problem. 4/12 mother (who initially gave positive response) have agreed and actually tried the recommendation. Mothers tried to feed khichri and firni to their children. 3/4 mothers have given **positive** response after acting on this recommendation, saying "child liked eating khichri and fruits," "Child liked it and slept for a long time." The **negative** response after trying the advice is that mothers don't have enough time and also that the child is not ready to eat and may vomit if mothers try to feed khichri to child.

Segment: Mothers of Children Recovering from Illness, 6 - 24 Months Old

Problem- 1 : Mothers are not giving complementary foods or giving too little or not frequently enough:

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
1a. Feed your child at least 4 times daily	14	13	1-NR	9	9	7	2	0	7
1b. Increase the serving size of child of 6-9 months to ½ pao. Give this ½ pao serving thrice daily:	10	9	1	5	4	3	2	1	3
1c. Breastfeed the child 6-8 times a day and feed semi-solids between breastfeeds:	8	6	1 1-NR	2	2	2	1	0	1
1d. Have a set meal time for feeding the child (same as the family):	13	12	1-NR	4	4	4	0	0	3
1e. Feed the child the same foods as the family. If food is spicy, add yogurt, potato or milk:	15	14	1-NR	7	7	7	0	0	5
1f. Avoid feeding sweets, sugary drinks and sodas, especially before meals.	11	10	1-NR	2	2	2	0	0	2
1g. Add some oil/ butter or ghee to child's food. (1 teaspoon per meal)	12	11	1-NR	6	5	4	1	1	4
1h. Make some food specially for child like khichri	14	12	1 1-NR	4	4	3	1	0	3

Problem 2: Mother doesn't increase the amount of food her baby eats when he/she is recovering from illness:

2a: Increase the frequency of breastfeed each day. At least 2 times more than usual.

Positive Responses:

Balochistan:

- It is easier for me to increase the frequency of breastfeeding.

Punjab:

- Yes, I will breastfeed the child more.

- OK, I will increase the frequency of breastfeeding, as I don't have to consult or take permission from anyone.

- I will breastfeed the child two times more than usual.

- I will breastfeed more so that my child gets healthier and grows.

NWFP:

- I will try to increase the frequency of breastfeeding each day.

Sindh:

- I can do it.

- It's easier.

- I will try.

Urban:

- I am already breastfeeding my child more.

Negative Responses:

NWFP:

- No, I can't do this. It's totally impossible.

2b: Have the child weighed every week until he/she regains the weight lost during illness.

Positive Responses:

Balochistan:

- I will get my child weighed, because it's for her own good.

Punjab:

- Yes, I will because it's for my child's benefit.

NWFP:

- I will go to the hospital to get my baby weighed so that I can know if baby is gaining weight or not.

Sindh:

- I can do it.

- It's easier.

- I will try.

- In this way I can know if the child has gained weight or not.

Negative Responses:

Punjab:

- It's impossible.

- Here it is very difficult.

NWFP:

- The health center is too far, so its impossible for us.

Urban:

- It's very difficult for me. I can't go to the doctor every week.

2c: Breastfeed more frequently, avoid bottle-feeding or other drinks.

Positive Responses:

Punjab:

- OK, I will give milk to the child in a cup, because I don't have to boil the cup again and again, and I don't have to ask permission from anyone.

NWFP:

- I will give juice in a cup to the child. I don't use a bottle so its not a problem for me.

Sindh:

- I will try to make the child get rid of the bottle.

Urban:-

- I will try to give milk to the child in a cup and discontinue using the feeder.

Negative Responses:

NWFP:

- Neither do I give bottle to the child and nor I will.

Urban:-

- I can't breastfeed the child because I have stopped breastfeeding. I will have to consult my MIL.

2d: Increase the amount of food and drink in your diet also.

Positive Responses:

Balochistan:

- I will try to increase the amount of foods in my daily diet.

Punjab:

- I will increase the amount of food in my diet because there is no one to stop me from eating.

- Instead of taking one roti, I will eat one and a half roti with lassi, butter, and milk.

NWFP:

- I will increase the amount of food in my diet so that the child gets more breast milk and does not become weak.

- OK, I will try.

- Yes, I can do it. Now, instead of taking three meals a day, I will take five.

Sindh:

- I will do this for my own health and strength.

Urban:

- I will try to increase the amount of foods in my daily diet.

Negative Responses:

Punjab:

- I cannot eat more than my appetite.

Sindh:

- I cannot eat more. It's impossible.

2e: Serve at least one more meal to child each day, at least 4 meals to child under 1 year and 6 meals for a child under age of 1 year.

Positive Responses:

Balochistan:

- Yes, I already give my child an extra meal.
- I will try. If the child eats, I will continue.

Punjab:

- I will make something extra daily for my child or will feed him a banana.
- I will feed my child with rice and milk daily at night.

NWFP:

- I will give my child one more meal so that she gets more diet.
- I will feed my child with some extra fruit or vegetables in addition to my breastfeeding.
- I will feed my child 7-times so that she gets healthy.

Sindh:

- I can do this.
- I will try to do this.
- I will increase one meal and will feed him at night.
- If nothing happens to the child, I will feed him more.

Urban:-

- I will give my child an extra meal daily.

Negative Responses:

None

2f: Add oil or ghee to all meals.

Positive Responses:

Balochistan:

- It's easy. I can do this.

Punjab:

- I already feed him butter with roti. I will use a half spoon more of butter.
- Ghee is more nutritious so I will add ghee in diet.

NWFP:

- It's easy. I will buy oil separately for the child and will cook food in it so that she eats happily.
- I will make choori for my child at home and will feed him.
- I can do this easily, as butter is available at home.

Sindh:

- If child's chest does not get congested, then I will add oil or ghee.
- I will do this.

Urban:

I have added one more spoon of ghee in preparing the food.

Negative Responses:

None

2g. Add vitamin A sources daily to child's meals; e.g., carrots, green vegetables, ghee, etc.

Positive Responses:

Punjab:

- I can't buy special food. Whatever is cooked at home I will feed it to the child.
- I will try.
- I will start feeding my child vegetables. Since we grow vegetables at home it's easier.

NWFP:

- I will cook gajar halwa and feed it to the child.
- I will boil vegetables and will give the soup to the children.
- Yes, I can do this since radish and vegetables are easily available in this season.

Sindh:

- It's easy, so I can do this.
- I will.

Negative Responses:

Urban:

- I will give my children vegetable soup like potato and carrot.

Options mothers were most willing to try, constraints, and motivations:

Problem 2: Mother does not increase the amount of food her baby eats when he/she is recovering from illness.

Thirteen mothers had this problem. Following are the eight recommendations given to them.

2a: Increase the frequency of breastfeeding each day by at least 2 times more than usual.

Eleven of the 13 mothers were given this recommendation. Nine gave an initial positive reaction to this recommendation. Three of them agreed but only two had tried actually. The motivational statement given by one mother was "It was easier to increase the frequency of breastfeeds." Two mothers expressed constraints:

"I am weak and cannot feed many times. There are other children in the house also."

"I do not have enough breast milk. I tried but do not have enough, so the child would cry and I gave milk in a feeder."

2b: Have the child weighed every week until he/she regains the weight lost during illness.

Ten of the 13 mothers were given this recommendation. Only a few had positive reaction and agreed to try the practice: One said, "It is easier and in this way I can know if the child has gained weight by increasing the diet."

2c: Breastfeed more frequently, avoid bottle-feeding or other drinks.

Ten of 13 mothers were given this recommendation. Five had a positive reaction and three agreed to try it. Only one mother felt that her child should discontinue taking milk from bottle,

and all three gave a negative statements:

"I've tried to feed the milk in cup, but the child can't hold it and dropped it, so I restarted bottle-feeding."

"I tried with a cup, but the child did not like to drink from it. Therefore I continued feeding with bottle."

"I've tried but child is not ready to quit bottle at this stage."

2d: Increase the amount of food and drink in your diet also.

One mother was given this recommendation. Two of 8 (who gave positive reaction) agreed and tried the recommendation. The positive reactions given by both of these mothers were:

"I prepared separate vegetables for child, and he liked it and ate it."

"Whatever is cooked in the house I eat. Instead of one roti I eat two, and I drink milk three times daily in a glass."

The only negative reaction to hearing this advice was from a mother felt that it is difficult to prepare food separately for the child.

The motivational statements given by two mothers were:

"When I prepared less spicy curry, the child liked it and ate more."

"Since I've increased amount of diet and added milk in my diet, more breast milk is produced, and I also don't feel weak."

2e: Serve at least one more meal to child each day, at least 4 meals to child under 1 year, and 6 meals to a child under age of 1 year.

This proved to be the most popular recommendation -- to serve child at least one more meal each day: Eight of 10 mothers who gave positive reactions agreed and tried the recommendation. Seven of 8 mothers gave positive responses, saying:

"The child liked it, when I gave roti dipped in soup."

"The child is getting used to eating semi-solids."

"It's good that child started taking food by herself."

"The child played contentedly."

One mother said that her child got diarrhea, so she stopped the additional feeding.

Motivational statements included the following:

"The child's stomach is full, and it does not cry and sleeps well."

"The child will increase the weight by having more meals."

2f: Add oil or ghee to all meals.

Only nine of 13 mothers were given this advice. Two of the 9 mothers who gave positive reactions agreed and tried the recommendation. They said: "The child likes eating meals which were cooked in ghee," and "By adding oil to meal, child likes the taste."

2g. Add vitamin A sources daily to child's meals; e.g., carrots, green, vegetables, ghee, etc.

Eleven of 13 mothers were given this recommendation. Seven gave initial positive reactions and agree to try the recommendation. Most of them gave such foods as butter, ghee, banana, peas, carrots, and potatoes. Six had a positive reaction, saying, "The child likes it," "The child's health is improving"; "I liked the advice that the child can be fed vegetables, and also the child liked vegetables"; "I feed the child whatever is cooked at home." The only negative statement given was that one mother did not give green vegetables due to diarrhea.

Motivational statements were:

"My time is saved because I fed the child whatever is cooked at home."

"Ghee is very energizing and the child can gain more energy from it."

2h. Serve your child's favorite foods daily.

Nine of 13 mothers were advised to do this. Four initially gave positive responses and agreed to try this advice. All gave positive responses, saying, "The child likes potato and rice, so I cooked it and child likes it"; "The child eats happily"; "I put milk in the food because the child likes milk." The only negative reply given by mother was that it was difficult for her to prepare additional food for child.

A motivation for mothers can be that the child will eat more if favorite food is given.

Problem- 2 : Mothers do not increase the amount of food their babies eat when they are recovering from illness:

Recommendations	TIPS - II				TIPS - III				
	Total No. of mothers to whom these recommendations were given	Mother's reactions against these recommendations		# Mothers who agreed to try	# Mothers who actually tried	Reaction of mothers after trying these recommendations		Mothers who initially agreed but did not follow the recommendation	Mothers who agreed to continue
		Positive	Negative			Positive	Negative		
2a. Increase the frequency of breastfeeding each day. At least 2 times more than usual:	11	9	1 1-NR	3	2	1	1	1	2
2b. Have the child weighed every week until he/she regains the weight lost during illness.	10	4	5 1-NR	1	1	1	0	0	1
2c. Breastfeed more frequently, avoid bottle-feeding or other drinks:	10	5	4 1-NR	3	3	1	2	0	1
2d. Increase the amount of food and drink in your diet also:	11	8	2 1-NR	2	2	2	1	0	2
2e. Serve at least one more meal to child each day, at least 4 meals to child under 1 year and 6 meals for a child under age of 1 year:	10	10	0	8	8	7	1	0	8
2f. Add oil or ghee to all meals:	9	9	0	2	2	2	0	0	2
2g. Add vitamin A sources daily to child's meals, e.g., carrots, green vegetables, ghee, etc.	11	11	0	7	7	6	1	0	6
2h. Serve your child's favorite foods daily.	9	9	0	4	4	4	1	0	4

V. Household Observations

These observations were made during the first visit to mothers, and during in-depth interviews (IDIs) of MILs and fathers. The observations fall into three major categories:

- Observations related to cooking, feeding, eating, bottle/breastfeeding, use of soother and cultivation of kitchen garden.
- Cleanliness of the environment, food hygiene, hand washing, and boiling water before drinking.
- Workload, care practices, and family hierarchy (grading of status and authority).

Observation of households with a child who has diarrhea: 0-5 months old

The majority of mothers were busy cooking food. Almost all mothers were observed breastfeeding their young infants from 10 to 30 minutes, often with a loving and caring attitude. However, a bottle with stale milk from last night was observed in one household. One child from the sample universe and 3-4 non-sample children were using a soother. Some non-sample children were eating bananas or foods. None of the households have cultivated a kitchen garden.

The majority of the houses were not cleaned, with dirty linen or utensils lying around. Most households had cattle and dung. Some also had poultry in the courtyard. Only one house was clean. Two of the mothers were observed washing the hands of the child. Food was either not covered or had lot of flies on the cover. The cooking place was quite dirty in one household.

Most often mothers were observed carrying out household chores. Some had support from grown daughters. Sometimes MILs were observed ordering the DIL to clean the house. The proportion of men being served food first and those eating with family was equal on observation.

6-24 months old

The majority of the mothers were observed cooking food or making roti. Food was kept covered in some households. Cooking places were not clean in rural areas. Feeding bottles were observed in some households, most often dirty. A dirty soother was used for one child. Another child looked obviously malnourished. Most mothers were observed breastfeeding satisfactorily.

Most urban households were clean compared to rural houses. Rural houses often had cattle and dung in the courtyard. Most families kept the food covered. Three mothers and one MIL were seen washing their hands. Water was boiled for drinking in one household.

Most of the mothers were busy with household chores. Sometimes the whole family was seen working together. One urban mother was in total control of the household situation. She lived

with her mother as her husband worked elsewhere. In a few households, men were served food first.

Observation in household with a child recovering from diarrhea, 0-5 months old

Mothers (and sometimes MILs) were observed cooking food. Feeding bottles were observed in one household, cleaned but not covered. Soothers were also seen sometimes. Most often mothers were seen breastfeeding their children, once or twice, for 10 to 15 minutes each time. One child was observed sleeping peacefully in the lap of the mother.

Most houses were dirty either because of cattle and dung or poultry in the courtyard or had dirty clothes lying around. Food was often uncovered. Some houses were clean. One was being plastered with mud.

Almost all mothers were busy with household chores. They were often helped by a daughter or MIL. Some mothers were observed caressing and caring for their children.

Observations from households with healthy children, 0-24 months old

Food was cooked either by the mother or sister-in-law. One mother looked obviously malnourished. Two of the mothers were observed breastfeeding their children. Five of the households contained a feeding bottle, often dirty with flies sitting on the teat.

Observations during IDI of MILs

Bottle and breastfeeding was observed equally. Food was cooked most often by mother and was kept covered. Two urban houses were very clean, while rural houses were dirty. One mother was observed washing hands with soap and water. Often MILs were seen ordering DILs around. One MIL seemed to be very good natured.

Observations during IDI of Fathers

Most often the food was cooked by the mother. In one household, freshly cooked food was heating. In some houses food was not covered. Children were sometimes seen either with a soother or a feeding bottle. Some mothers were breastfeeding. The courtyards of some houses were clean. Mother did not wash hands before serving food. Sometime MILs were seen ordering mothers around. In one household, the FIL was served food first. The MIL and mother took food with the children.

VI. Data on Communication Preferences

Mothers

Communication data was collected from 70 pregnant and lactating mothers and 43 mothers of sick children and children recovering from illness.

Slightly fewer than half the mothers reported having a radio in both rural and urban areas.

Of the respondents who had a radio, half do not listen to it at all. Reportedly, workload was the main reason for not listening to the radio. "I don't have time to listen to radio." Other reasons included not having an interest and "children or men listen to their favorite programs so women don't have a chance to listen."

Some women listen to the radio once in a while: "when the radio is on and I am working, I listen to it"; or "when someone else is listening, I also get to listen."

A few women reported listening to radio programs regularly. Their favorite programs include song and entertainment programs and discussions among females on female issues in a program called "MEHFIL."

About two-thirds of mothers across the board said they have a TV. Of these, an overwhelming majority reported watching TV for 2 hours or less. Their favorite program is an Urdu drama which is aired around 8 pm.

Other programs women reported watching include song, news, and health programs. Only a few women said they never watch TV.

Almost all women prefer to watch TV between 8 and 10 pm.

When asked from where they would like to get the information on health issues, they responded that health care providers were the most desired source of information.

Among health care providers, doctors are the most favored source of information. A few women mentioned LHWs as a convenient source of information because they visit them and women don't have to go out to seek information.

About one-third of the women said they like to get information on health issues from family members, especially parents and other "older, experienced members." "They have been through many of these experiences, and they have learned through experience, so their advice is good."

Regarding places where women usually gather, the majority of mothers mentioned marriages and mourning occasions.

Several women mentioned personal visits as an occasion to get together with other women. It

seems that urban women visit each other less frequently. Other places mentioned in this regard include shopping, at water sources, and cooking roti at the tandoor.

Fathers and Mothers-in-Law

Ten fathers and 12 MILs were interviewed on communication channels. About half of the MILs had a radio. Fewer than half of the fathers possessed a radio. Most MILs and fathers do not listen to radio or listen to it rarely. The ones who listen to radio like entertainment programs.

Most MILs and fathers had a TV. Most watch TV for less than two hours but watch it regularly. Most fathers prefer news, and MILs prefer drama. Only one MIL said health programs are her favorite.

For fathers and MILs, the preferred source of information on health is the doctor. About 50 percent of fathers mentioned TV as a preferred source of information on health. Some fathers also mentioned newspapers.

Concerning where women meet in their community, the majority of MILs and fathers mentioned weddings and funerals. Some MILs mentioned personal visits.

The Manoff Group

The Manoff Group is a private social marketing agency specializing in behavior-oriented planning and communication for maternal and child health, nutrition and family planning programs. As a subcontractor to John Snow, Inc. (JSI) on the USAID-funded MotherCare project, The Manoff Group was responsible for providing technical assistance for the formative research/IEC and curriculum development for maternal and child health and nutrition under the Pakistan NGO Initiative (PNI).

The Asia Foundation

The Asia Foundation was established in 1954 - the year it opened an office in Pakistan - to promote U.S. Asian understanding and cooperation. The Foundation's grant assistance in Pakistan supports non-governmental organizations and government institutions.

Currently The Asia Foundation, under a grant from USAID, is implementing the grant for The Pakistan NGO Initiative (PNI), which is a social sector program. The Foundation, as a collaborative partner, provided financial and managerial support to implement the qualitative research through its Foundation Managed Program Activities (FMPA).

MotherCare:

MotherCare was created to assist countries, communities, and individuals to identify and implement solutions to the widespread problems affecting women's reproductive health and the health of newborns. MotherCare is currently providing technical assistance to 9 partner NGOs under the PNI.

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