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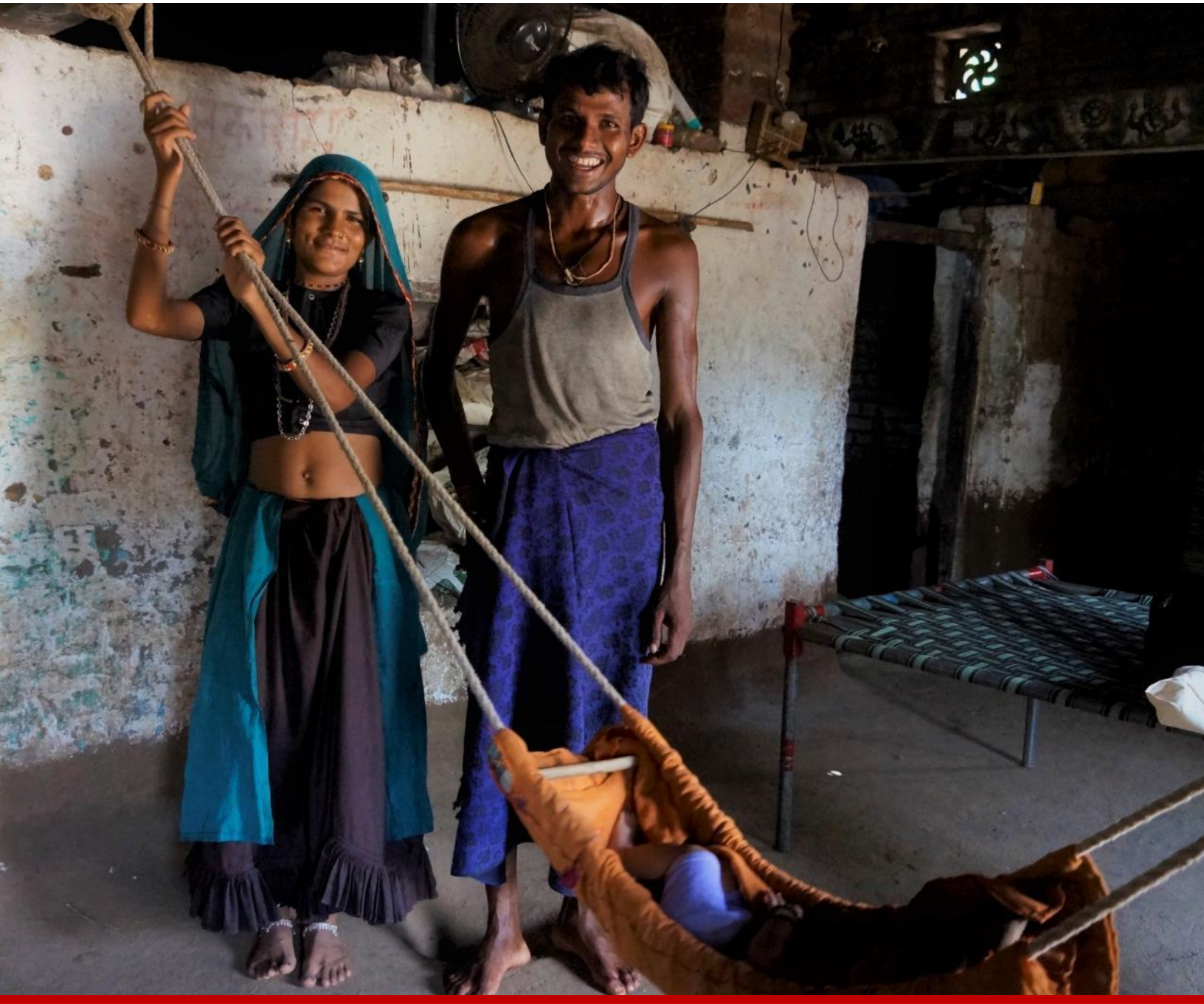

Social and Behaviour Change Research

on Enablers and Barriers to Practicing Promoted Nutrition and Hygiene Practices Madhya Pradesh and Maharashtra, India

Prepared for: Securing Nutrition, Enhancing Resilience (SENU) Project, GIZ India

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This report was prepared as part of an assignment to develop a social and behaviour change strategy for GIZ's Securing Nutrition, Enhancing Resilience project in India. It describes the main findings from the conducted qualitative research. The data was collected and photos were taken by development communication consultant, Ms. Seema Kurup. The research methodology and the report was prepared by social and behaviour change consultant Petr Schmied (LinkedIn). Petr and Seema appreciate all the support provided by GIZ, Welthungerhilfe and its implementing partners. This assignment would not have been possible without the financial support provided by the German Federal Ministry for Economic Cooperation and Development (BMZ).

The cover photo is of a couple from a tribal family in a hard to access village in Rajpur block of Barwani district, Madhya Pradesh. They are among the project's target group members. The photo was taken by Seema Kurup.

ABBREVIATIONS

ASHA	Accredited Social Health Activist
BMZ	The German Federal Ministry for Economic Cooperation and Development
DWCD	Department of Women and Child Development
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
N-PLA	Nutrition- Participatory Learning and Action
SBC	Social and Behaviour Change
SENU	Securing Nutrition, Enhancing Resilience
THR	Take-Home Rations

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1. INTRODUCTION

Within the framework of the global special initiative 'One World – No Hunger' of the German Federal Ministry for Economic Cooperation and Development (BMZ), the Food and Nutrition Security, Enhanced Resilience programme of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) is being implemented in 10 countries including India. With completion of its first phase in June 2020, GIZ India is now starting its second phase (2021-2025) entitled **Securing Nutrition, Enhancing Resilience** (SENU) project. The project targets four districts in the state of Madhya Pradesh and two districts in Maharashtra. The project will be implemented at state level in close **cooperation with**:

- the non-governmental organization Welthungerhilfe and its local NGO partners (responsible for promoting good nutrition practices and nutrition-sensitive micro planning)
- an agency implementing Community Nutrition Gardens (selection process ongoing)
- the Departments of Women and Child Development (DWCD) in Madhya Pradesh and Maharashtra

The **project aims** to:

- improve nutrition and hygiene knowledge and practices
- diversify food production and income
- strengthen nutrition governance

To achieve these objectives, the project will implement a range of **activities**, including Nutrition-Participatory Learning and Action (N-PLA) sessions at the community level, promotion of positive deviants' practices, support to homestead vegetable production and to Community Nutrition Gardens, strengthening the capacities of Anganwadi workers and DWCD, and support to nutrition-sensitive microplanning.

In order to be effective in improving maternal and child nutrition, food production and hygiene practices, GIZ decided to conduct **social and behaviour change (SBC) research aiming to answer the following questions**:

- What are the main factors that prevent the target group members from following the selected nutrition, food production and hygiene practices? (= the '**barriers**')
- What are the main factors that enable / motivate the target group members to follow the selected nutrition, food production and hygiene practices? (= the '**enablers**')
- What can be done to overcome the main barriers and to take advantage of the enablers through the integrated approach of the project and positive deviance?

The research consists of two parts: A **qualitative study** identifying various enablers and barriers to the promoted practices (see the following page). The findings of this study are described in this report. They were used to design the second part of the research, a **quantitative survey** (taking place in September 2021, as a part of SENU's baseline) that will determine how prevalent the identified enablers and barriers are. This approach will enable the SENU project to develop an SBC strategy that focuses on those barriers / enablers which are most prevalent and therefore deserve the most attention.

Detailed recommendations on which barriers / enablers should be addressed and how, will be provided only once the quantitative data from the baseline is available. This is why this report does not include a Recommendations section, as it wants to avoid making conclusions based on qualitative data only.

GIZ recently completed a study dedicated to gender-related barriers to improved maternal and child nutrition practices. Considering that gender inequalities represent a major barrier to following many of the desired practices, the findings of this study should be considered alongside with the data presented in this report.

2. METHODOLOGY

This chapter describes the main methodological aspects of the conducted qualitative research.

2.1 Studied Behaviours

The research looked into the following behaviours:

- **Early initiation of breastfeeding**, defined as putting a newborn to a mother's breast within one hour of birth.
- **Exclusive breastfeeding**, defined as an infant receiving only breast milk for the first six months of life. No other liquids or solids are given (even on hot days), including water, broths, etc. The only exception is oral rehydration solution and other medicines provided in liquid form, if required.
- **Consumption of body-building foods by children** includes consumption of locally available, culturally acceptable and affordable foods that are rich in protein. Depending on the context, these can include dairy products, eggs, pulses, chickpeas, nuts and millets.
- **Consumption of immunity-boosting foods by children** includes consumption of locally available, culturally acceptable and affordable foods that are rich in vitamins and minerals. Depending on the context, these can include pulses, dairy products, dark green leafy vegetables, vitamin A rich foods, and other fruits and vegetables.
- **Eating an extra meal during pregnancy** means eating an additional portion of food (on top of what a woman would usually eat before pregnancy).
- **Consumption of body-building foods by pregnant and lactating women** – the same definition as for children.
- **Consumption of immunity-boosting foods by pregnant and lactating women** – the same definition as for children. However, a special emphasis was placed on the consumption of iron-rich foods, such as pulses, millets and dark green leafy vegetables, as a way of reducing the risk of anaemia.
- **Minimum meal frequency for children**, defined as eating solid, semi-solid or soft foods at least the minimum number of times during the previous day.[1]
- **Timely initiation of complementary feeding** means starting to feed soft foods to a child at the age of 6 months.
- **Ensuring baby friendly feeding** means ensuring adequate food portions and consistency (soft / semi-solid / solid depending on age), feeding children from their own bowl and avoiding spicy foods.
- **Production of ≥ 4 types of nutrient-rich veg / fruits for homestead consumption**, defined as households growing in their yards or fields at least 4 types of nutrient-rich vegetables / fruits as promoted by the project. These may include dark green leafy vegetables, peas, tomatoes, lemons, mangoes, guava and papaya.
- **Ownership and use of handwashing station** is defined as households having a dedicated place for washing hands with flowing water and soap available at the site.

Additionally, the **following crosscutting topics were researched**: the role of husbands and grandmothers in hindering or enabling good nutrition practices, intrahousehold sharing of food and the role of positive deviants - people who manage to ensure good maternal and child nutrition, despite facing similar challenges to those of their peers.

[1] See https://www.indikit.net/indicator/1-nutrition/17-minimum-meal-frequency

2.2 Respondents and Data Collection Methods

The qualitative research used a combination of four research methods: group interviews, key informant interviews, observations and video / photo documentation. It involved the following activities:

- group interviews with women of reproductive age, pregnant women and mothers of children aged 0 - 3 years
- group interviews with husbands / fathers
- group interviews with grandmothers
- group interviews with Anganwadi workers
- key informant interviews with members of health facility staff responsible for pre/post-natal counselling
- key informant interviews with agricultural extension workers advising smallholder farmers on their agronomic practices at the community level
- key informant interviews with the Gram Panchayat representatives
- observations of homestead gardens
- observations of child feeding practices
- observations of hand washing practices and facilities (at people's homes)

All data was collected in Khandwa and Barwani districts (Madhya Pradesh) and Nandurbar district (Maharashtra). A detailed overview of the number and locations of conducted interviews and observations is provided in Annex 4.1 (prepared by the interviewer). The selected locations were in diverse socio-economic environments, with consideration being taken of their distance from a major market / town; and population (cast / tribal population).

All respondents were **informed** about the purpose of the interviews / observation, the option to opt-out at any point, data usage (including confidentiality), and were asked for their agreement to participate in the interview / observation. The interviewer was responsible for ensuring that the interviews were conducted in privacy, enabling the respondents to feel more at ease when responding to more sensitive questions. All interviews were conducted in the Hindi or Marathi language (and local dialects).

2.3 Data Analysis and Reporting

All interviews were audio-recorded using a smartphone and subsequently transcribed and translated to English. The content of the transcripts (over 1,600 pages) and observation forms was first coded manually according to its content and meaning. The data was then organized by studied behaviour and by any sub-themes emerging from the transcripts. The key findings of the qualitative research are presented in this report and will be discussed during a validation workshop involving the staff of GIZ and its partner organizations. As explained above, the conclusions and recommendations related to addressing the most influential barriers and enablers will be provided only once the qualitative data is cross-checked with the results of the quantitative survey (in early 2022).

3. FINDINGS

This chapter describes the identified enablers and barriers to practicing the promoted behaviours. It is divided into six broad thematic areas: women's diet during pregnancy and lactation, breastfeeding, complementary feeding, homestead production of vegetables / fruits, hygiene and crosscutting topics. Please be aware that the findings described in the chapter on crosscutting topics apply to most of the previous chapters.

3.1 Women's Diet During Pregnancy and Lactation

This chapter covers practices relating to women's additional calorie intake during pregnancy and the consumption of nutritionally diverse foods during pregnancy and lactation.

3.1.1 Additional Calorie Intake During Pregnancy

Promoted Behaviour: Pregnant women consume an additional energy-giving meal / snack each day.

Barriers:

- **Nausea**: Especially – but not exclusively – in the first trimester, women experience nausea that leads to decreased appetite. An interviewed mother explained that women *"… don't feel like eating … they vomit food."* Another woman commented that during pregnancy she *"didn't feel like eating … everything used to smell bad."*[2] An interviewed father summarized the topic by saying that: *"Usually, it is the case that pregnant women need to have more food, but they don't feel like having more food..."*.[3]
- **Household access to food**: Some households have very poor access to food (especially those with no or very little land) and women are not able to consume an additional meal or snack every day. As an Anganwadi worker explained: *"… women who* [can] *get one extra meal, they eat it ... those who can't get it, they only eat two meals a day."* She also said that the limited income many households earn must be spent on various competing household needs, making it difficult to purchase more food.[4]
- **Concerns related to increased calorie intake**: There were multiple concerns relating to the negative consequences of women eating an additional meal / snack during pregnancy, including:
  - A concern that if a woman eats more during pregnancy, she will not feel good and will not be able to work in the field. *"If a woman is working in the fields ... you have to bend, do work, the woman will feel difficulty... so if a woman is having more food the woman won't be able to work properly..."*.[5] An interviewed grandmother said that *"If she eats more, she will roll off to sleep!"* while another added: *"Yes, she will feel lazy."*[6] In another discussion husbands said that *"What we are trying to say is that she should not eat all at once...* [not big portions]".[7] The message on an additional intake of calories needs to be communicated carefully to avoid misunderstandings regarding the amount of additional food that women are recommended to eat.
  - Some women also reported that eating less is one of the ways of making pregnancy more bearable. As an interpreter explained: *"she says that she had problems moving around during her pregnancy … she wanted to avoid a difficult delivery so she would eat less."* Another respondent said that: *"In our community, people want to avoid problems during pregnancy … So, they avoid eating too much of food during pregnancy."*[8]

[2] Discussion with mothers, Itwamaal village, Khandwa district
[3] Discussions with fathers, Bhulgaon village, Barwani district
[4] Discussion with Anganwadi workers, Jhulwaniya village, Barwani district
[5] Discussions with fathers, Bhulgaon village, Barwani district
[6] Discussion with grandmothers, Chunabhatti village, Barwani district
[7] Discussions with fathers, Khandwa district
[8] Discussion with mothers, Dhirajgaon village, Nandurbar district

- Other concerns were that eating more is not good for the baby and will make the delivery more difficult. The Anganwadi workers explained that especially some grandmothers say that "[if] *you eat all this, then the child will gain too much weight and it will cause problems in delivery."* Additionally, they explained that "*If we suggest them that pregnant women should eat 3-4 times a day, they say that child will feel pressured if a woman eats so much."*[9]

- **Lack of time**: According to an Anganwadi worker, another barrier is that women are too busy with childcare and household chores, saying that: *"Some women get time, they eat. Some women don't get time, they don't."*[10] The biggest lack of time is especially during labour intensive parts of the agricultural season, so the timing of the pregnancy also plays a role. Another important factor was the extent to which the household members helped with decreasing the woman's workload. As an Anganwadi worker explained*: "Some people do not take their daughter in laws to work. If she is at home, she eats* [more frequently*]. And women who don't stay at home they don't."*[11]
- **Food taboos** concerned primarily foods that are perceived to bring heat to a person's body ('hot foods') and those that cool down bodies ('cold foods'). Several types of such foods were reported as not suitable for pregnant women, such as papaya, banana, brinjal, cluster black grapes, pineapples, and eggs. The main concern was an increased risk of miscarriage or poor child health: "*If the mother eats cold food then the child will be born weak."*[12] Generally, the opinion was that if a mother eats 'cold food', the child will get ill. If she eats 'hot food', it might hurt the child.
- **Limited family support**: When men were asked about their wives' diet during pregnancy, they responded by saying: *"I didn't notice how much she ate."* and *"I did not pay attention at all."*[13] This suggested lacking encouragement to consume more calories during pregnancy. Another opinion was that it is a cultural norm where men are not supposed to show care and attention to their wives.[14] Anganwadi workers also reported that some mothers-in-law scold their daughters-in-law for eating "too much", saying that "*because of this she* [daughter-in-law] *does not eat. She is afraid that if she eats now, they'll find out and shout at me, saying that she just keeps eating".*[15]

Enablers:

- **The absence of barriers listed above**, such as poor access to food and other factors, represents additional enabling factors.
- **Desire to have a healthy child** is the strongest motivator to this behaviour. For example, a number of interviewed fathers explained that pregnant women *"should eat fruit, khichdi* [lentil and rice boiled together] *… because there is a child in the womb of lady and child should be healthy."*[16] This motivator was clearly echoed by household members in all the districts included in this research.
- **Size and frequency of meals**: Consuming smaller meals more frequently enables women to increase (or at least maintain) their calorie intake even at times when they did not feel like eating.
- **Number and quality and antenatal care checks**: Anganwadi workers reported that women who are more frequently exposed to antenatal counselling that emphasizes the importance of eating extra snack / meals are more likely to follow the recommendation. This is especially if the counselling is done at the mother's home and also includes other family members, such as grandmothers.
- **Education level** was reported to have a positive impact on practicing this (and other) behaviour.

[9] Discussion with Anganwadi workers, Jhulwaniya village, Barwani district
[10] Discussion with Anganwadi workers, Jhulwaniya village, Barwani district
[11] Ibid.
[12] Discussion with grandmothers, Kakoda village, Khandwa district
[13] Discussions with fathers, Kandwa district
[14] Comment from the lead interviewer of this research, Ms Seema Kurup.
[15] Discussion with Anganwadi workers, Kotwadiya village, Khandwa district.
[16] Discussions with fathers, Bhulgaon village, Barwani district

- **Perceived importance of sufficient calorie intake**: Some interviewed mothers insisted on the importance of a sufficient intake of calories during pregnancy, saying, for example: *"One has to eat, even if you feel like vomiting, you have to eat the food."*[17] A grandmother explained that women *"should eat more ... for proper growth of the baby ... she should eat sufficient food."*[18] Other grandmothers explained that women *"should eat more so that the child born is also healthy. The child will also be healthy, the daughter in law as well. … Where she is eating 2 rotis, she should eat three. That will give her strength... that will increase her blood..."*[19]

3.1.2 Pregnant and Lactating Women's Diet: Protein-Rich Foods

Promoted Behaviour: Pregnant and lactating women consume protein-rich foods every day.

Barriers:

- **Poverty**: Difficulty in accessing protein-rich foods is the most significant barrier to their consumption. This is primarily due to low income, limited production of protein-rich plants and lacking ownership of domestic animals (poultry, cows, buffalos, etc.). The hardest to afford are animal-based sources of protein, such as paneer, to a lesser extent also some types of meat.
- **Cultural or ethical preferences**: Due to cultural reasons, some women avoid consuming some types of animal products (i.e. are vegetarian), reducing their intake of animal-based protein.
- **Concerns about having a difficult delivery**: As was explained above, some women are concerned that the consumption of certain foods will increase the unborn child's weight and make the delivery difficult. This also includes some protein-rich foods, such as milk. An Anganwadi worker explained that *"Pregnant women don't drink milk"* because they believe that *"the child will gain too much weight."*[20]
- **Food taboos**: Anganwadi workers reported that in the first five months of pregnancy, women are discouraged from eating fish and eggs, due to a perceived higher risk of miscarriage. A group of grandmothers explained that eating groundnuts and curd is also discouraged during pregnancy, as it leads to *"a white sticky paste that forms all over baby's skin and gets stuck on the child".*[21]

Enablers:

- **The absence of barriers listed above** represents the main enabling factors.
- **Access to and consumption of low-cost, protein-rich foods**: Various types of dhal, soya and other legumes represent an affordable source of plant-based protein. Therefore, it is important that SBC communication activities focus on promoting the most affordable sources of protein, so that people see that it is possible to follow the nutritional recommendations.
- **Effective extension services**: Health / nutrition extension services that are able to effectively reach comment with useful counselling and other support were identified among the main enablers.
- **Social networks**: A group of mothers reported that it is a common practice to receive (either for free or paid) milk from neighbours who have cows or buffalos, enabling poorer households to have a relatively affordable source of animal-based protein.
- **Desire to have a safe delivery**: Interviewees from households expressed a clear concern for the pregnancy and delivery to go well for both mother and child, citing instances of foods which could interfere with the well-being of mother and child. It follows that an understanding of the role that protein-rich foods play in ensuring safer deliver would be an effective motivator.

[17] Discussion with mothers, Itwamaal village, Khandwa district
[18] Discussion with grandmothers, Dhirajgaon village, Nandurbar district
[19] Discussion with grandmothers, Kakoda village, Khandwa district
[20] Discussion with Anganwadi workers, Jhulwaniya village, Barwani district
[21] Discussion with grandmothers, Itwamaal village, Khandwa district

- **Desire to be less tired**: The interviews showed that many women have a high workload, resulting in sometime unpleasant tiredness. Protein-rich foods often have a high iron and other micronutrient content that helps people to feel less tired. Therefore, promoting protein-rich foods with a high iron content (such as pulses, eggs, etc.) as a way of reducing tiredness and having more energy might serve as another effective motivator. The same enabler also applies to the consumption of micronutrient-rich foods – see below.

3.1.3 Pregnant and Lactating Women's Diet: Vitamin / Mineral-Rich Foods

Promoted Behaviour: Pregnant and lactating women consume vitamin / mineral-rich foods every day.

Barriers:

- **Lacking access**: Poor access to vitamin / mineral-rich foods is the most influential barrier to their more frequent consumption. This is evident from several factors, including:
  - some households not having land to produce vegetables, fruits, legumes and other crops rich in vitamins and minerals
  - many crops being available during and immediately after the rainy season only, when there is enough water to grow them
  - limited income restricting households' ability to purchase vitamin / mineral rich foods
  - in some villages, there are no (or only very few) vendors selling vegetables / fruits, reducing households' possibilities to access them, especially during the dry season
- **Food habits**: The staple food in many households is roti with dhal. The consumption of meals with a higher content of vegetables is less common and depends primarily on their availability - i.e. they might not be seen as a necessary part of an everyday diet.
- **Food taboos**: Several types of fruits are discouraged to be eaten during pregnancy, due to a belief that they can harm the baby. These include banana, papaya, custard apple, lemon and guava. According to an interviewed Anganwadi worker, there is a belief that *"if the mother eats guava seeds they will go to the child's brain or some other part"*.[22] Another belief reported by an Anganwadi worker is that if women eat rice, the child will catch a cold (as rice is perceived as a 'cold food'). The same applies to curd, bananas and other types of 'cold foods'.

Enablers:

- **The absence of the barriers listed above** represents some of the main enabling factors.
- **Accessibility of vitamin / mineral-rich foods**: The more accessible (physically or financially) foods rich in vitamins and minerals are, the more likely it is that women will consume them. People who produce vegetables grow them largely in their fields which provide considerably bigger amounts of vegetables than most homestead gardens do. Collection of wild foods (e.g. from the forest) has decreased significantly over the past two generations though it is still practiced by some households, especially during the rainy season. Among the collected wild foods were Bhamodi mushrooms, Gathula, Khiltai, Jambul, Jungalkand, Powadiya, Mukho, Ambadi, Chirote leaves and Mahua flowers.
- **Popular meals that contain minerals / vitamins**: The traditional diet includes various foods with a high content of vitamins / minerals, such as various types of dhal. Helping women to make minor adjustments to their traditional meals (so that they include more micronutrients) might be more effective than introducing new meals or talking generally about the importance of fruits / vegetables.
- **Belief in the importance of vitamins and minerals**: Women who believe that the consumption of vegetables and fruits is important for their / their child's health are more likely to eat them.

[22] Discussion with Anganwadi workers, Jhulwaniya village, Barwani district

3.2 Breastfeeding

This chapter covers practices relating to early initiation of breastfeeding and exclusive breastfeeding.

3.2.1 Early Initiation of Breastfeeding

Promoted Behaviour: Mothers put their newborn child to the breast within one hour of birth.

Barriers:

- **Caesarean delivery**: Women who had a caesarean delivery are less likely to put their child to breast within one hour of birth, compared to those who had vaginal delivery. The main reasons include separation of mother and newborn and postsurgical pain and discomfort. The same applies to women who had a complicated delivery (e.g. involving more substantial blood loss).
- **Perceived lack of milk**: An auxiliary nurse midwife explained that *"some women believe that they are not able to produce milk* [straight after delivery] *… 'If milk is not coming, then how can we feed.' Even then, we tell them that even if milk is not coming, put the child to your breast. The milk will come."* [23] Women who do not believe that they can breastfeed straight after delivery are more likely to agree with giving the child other fluids.
- **Breastfeeding difficulties**: Some women face specific breastfeeding difficulties which result in delayed breastfeeding, such as delayed / minimal flow of milk or inverted nipples (read more in 3.2.2).
- **Beliefs about colostrum**: In the past, there was a belief that colostrum is 'spoilt milk' or 'dirty milk' which should not be fed to newborns. According to the respondents, this belief has decreased significantly; however, some women (especially older women) might still discourage mothers from feeding colostrum. Some health workers and mothers claimed that after delivery, no one feeds fluids other than breastmilk anymore but this opinion is likely to be too optimistic. For example, a group of mothers said about colostrum that: *"We don't feed that. We squeeze it and throw it out, and then give the child the nipple."*[24] At the same time, the respondents (mainly grandmothers) were not always able to explain why colostrum is supposed to be bad (it appeared more as a traditional practice). Discarding colostrum was reported more frequently among the members of the Adivasi community.
- **Lacking experience and skills**: Especially some first-time mothers are not sure of how they should breastfeed their child after delivery. They are also more susceptible to poor advice, as they lack confidence.

Enablers:

- **The absence of the barriers listed above** represents some of the main enabling factors.
- **Belief in the benefits of colostrum**: Women who believe that colostrum is full of essential nutrients and helps with strengthening children's immunity are more likely to feed it to their newborns. The interviewed midwives emphasized that feeding colostrum must be especially promoted during pregnancy, so that the mother's decision to feed colostrum is already made before the delivery.
- **Knowledge**: The interviewed women were generally aware that children should be put to the breast within an hour of birth.
- **Supportive mothers-in-law**: An interviewed midwife explained that after the delivery, women often feel weak and especially first-time mothers are not sure of how they should take care of their child. Therefore, aside from relying on the support provided by the health workers, they also follow the advice provided by a family member who might (or might not) be present at the delivery. This is usually their

[23] Discussion with auxiliary nurse midwifes, Chabootra village, Khandwa district

[24] Discussion with grandmothers, Itwamaal village, Khandwa district

mother-in-law, as it is less common for husbands. If the mother-in-law encourages her daughter-in-law to put her child to the breast, she is much more likely to do so.

- **Use of health services**: Women who deliver with the presence of a health professional are more likely to be encouraged to put their child to the breast shortly after the birth. They are also considerably less likely to feed any other fluids to the child straight after delivery. The same applies to women who access health / nutrition counselling services in the time after delivery.
- **Education level**: An Anganwadi worker explained that an educated woman, *"… listens to the doctor and us. But if she is not educated enough, then she might follow superstitious or religious beliefs."*[25]

3.2.2 Exclusive Breastfeeding

Promoted Behaviour: Mothers feed their children only breastmilk in the first six months of a child's life.

Barriers:

- **Perception that a child needs 'more food'**: Some women think that they are not producing enough breastmilk and therefore their children must be hungry / not receiving enough nutrients. As an interviewed mother explained: *"the child is not feeling full with just mother's milk."*[26] Due to this perception they start feeding the children soft foods and fluids, such as rice water, lentil water, goat / cow / buffalo milk, (grated) biscuits, roti or toast mashed in a liquid (e.g. dhal water), non-spicy dhal or thin porridge. They are then likely to breastfeed their child less frequently, resulting in their body producing less breastmilk (due to lower demand).
- **Perception that a child is thirsty**: Many of the interviewed mothers and grandmothers felt that during the hot days the children are thirsty ('their lips are dry') and need to be given water. An interviewed health worker said that even though they explain to mothers that frequent breastfeeding gives children all the fluids they need (even when it is hot), they still give their children some water to drink.[27] This practice was reported to be very common. When grandmothers were asked whether they fed water to several month-old children, they responded: *"We of course gave water to drink. Yes, we have to ... otherwise the liver gets affected. … The more water they drink, the better it is."*[28] Water was reported to usually start being given from the age of 2-3 months. Some parents reported that the water they provide was previously treated by boiling and filtering. On the other hand, another group of interviewed grandmothers rejected giving water*: "Not at all!* [only] *after it becomes 6 months old then we start giving little water."*[29]
- **Poor maternal nutrition**: Limited intake of calories is one (out of many) reason why some women have difficulties producing enough breastmilk. This applies especially to women from very poor households and to women who need to breastfeed during the lean season, when food is scarce. At the same time, it should not be seen as the main reason for a limited supply of milk. The biggest determinant of adequate milk supply is the frequency of breastfeeding - the more often and more effectively the child nurses, the more milk the mother will have.
- **Breastfeeding difficulties**: Some women face specific breastfeeding issues that make it more difficult for them to breastfeed, such as inverted nipples, engorged breasts, inflamed breasts, clogged milk ducts or the baby not latching on well to the breast. The more such difficulties they experience (or the longer they last), the more likely it is for them to stop or reduce breastfeeding, especially if they do not receive competent and timely help. The respondents also reported traditional beliefs related to some

[25] Discussion with Anganwadi workers, Jhulwaniya village, Barwani district
[26] Discussion with mothers, Itwamaal village, Khandwa district
[27] Discussion with auxiliary nurse midwifes, Chabootra village, Khandwa district
[28] Discussion with grandmothers, Itwamaal village, Khandwa district
[29] Discussion with grandmothers, Dhirajgaon village, Nandurbar district

of the difficulties. For example, when the breasts are swollen, mothers do not breastfeed the child. Instead, *"they remove the milk, and throw it away over ash. … That's the belief here."*[30] Another example is visits to traditional healers ("baba").

- **Early return to work**: An interviewed midwife explained that *"not even a month passes* [since delivery]*, and they* [mothers] *leave the house and go to the fields to work. Then they come back only after 3-4 hours, 5-6 hours."*[31] The time for return to work reported by different respondents ranged from 15 days to two months (it depends, among other things, on the actual agronomic season – i.e. how labour intensive it is). This is due to economic pressures combined with the expectations of other household members: *"… the family tells them to keep working … Some mothers-in-law put pressure, saying, 'you are just sitting around here after delivery, there is work to be done.'"*[32] The need to make a living (grow crops, migrate for labour work) is one of the main factors which takes mothers away from their children. Unless women work near their home or can take their child with them, it is very difficult for them to ensure that the child is fed breastmilk only. As interviewed grandmothers summarized: *"In those homes where the woman has to go to the field for work, so she feeds the child* [other food / fluids than breastmilk] ... *On the other hand, the woman who stays at home, she does not feed anything else."*[33]
- **Limited control over what a child eats**: The interviewed health workers explained that when mothers go to work to the fields or when they migrate for work (which can last from a few weeks to months), it is usually the grandmother who takes care of children, unless their mother can take them with her. When a mother is absent and/or when the child appears to be hungry, the grandmother might give the child a biscuit and tea or other snack (with or without the knowledge of the mother).
- **Influence of household members**: If a mother-in-law does not believe that a child should receive only breastmilk for this first six months, it is very likely that the child will not be breastfed exclusively (due to the mother-in-law's authority and control over what a child eats). Fathers' involvement in child nutrition is initially very limited and they generally tend to agree with what their mothers recommend.
- **High workload**: Many women have a high workload which results in them having limited time to breastfeed their child frequently. An ASHA worker explained that in such a context, babies are often fed only when they start crying.[34] Since breastfeeding is time-consuming (up to 3-4 hours per day) and requires a mother's presence (unless expressed breastmilk is fed), some mothers introduce other fluids and foods before the age of six months, as this frees up their time. As an interviewed mother explained: *"There's so much work to do … We have to feed a little something otherwise the child is always hungry and needs our milk*. [so we tell the child:] *Here, eat this biscuit and sleep!"*[35] A father said that *"Many times we start going to farms early …. we make an effort that the child starts having other food at an early age ... if he starts eating then he won't trouble the mother."*[36]
- **Need to pacify a child**: Anganwadi workers reported that when a child cries and the mother is not at home, some grandmothers give the child a biscuit or animal milk, so that the child is quiet.[37] This might be motivated by the desire to please the child and/or the need to have peace at home.
- **Desire to protect child against illness**: Some people believe that certain fluids and foods protect children from illnesses and/or make them stronger, such as dried dates, almonds or cashews crushed into a paste (or mixed with breastmilk or animal milk), honey, halwa, ghutti or jaggery water. These foods are fed even to very young children, starting from several days to weeks after delivery (though most of them are not fed frequently). The main motivator for these practices is to ensure that children are healthy and grow well.

[30] Discussion with auxiliary nurse midwifes, Chabootra village, Khandwa district
[31] Ibid.
[32] Ibid.
[33] Discussion with grandmothers, Itwamaal village, Khandwa district
[34] Discussion with ASHA workers, Bhulgaon village, Barwani district
[35] Discussion with mothers, Kotwadiya village, Khandwa district
[36] Discussion with fathers, Bhulgaon village, Barwani district
[37] Discussion with Anganwadi workers, Kakoda village, Khandwa district

Enablers:

- **The absence of the barriers listed above** represents some of the main enabling factors.
- **Desire for the baby to thrive**: All mothers want their children to be healthy. Those mothers who think that exclusive breastfeeding helps their children to thrive are more likely to follow this practice.
- **Belief that breastmilk alone is sufficient**: A very influential enabler is the belief that in the first six months children do not need to consume anything other than breastmilk in order to grow well and be healthy. Mothers who think like this are considerably less likely to introduce other fluids or foods. Such mothers were often referred to as 'smart' or 'educated' by health workers, because they have *"knowledge of what is right for her child. She* [a smart woman] *visits ASHA and Anganwadi regularly to learn, and asks what to do and what to not do. … For her child's future, for her child's health she only feeds her own milk and doesn't listen to anyone else. She does what she feels is right."*[38] The benefits of children receiving only breastmilk for the first six months were also appreciated by some of the interviewed grandmothers: *"… it is good for the child ... it builds the child's body … it makes the child healthy … Yes the child will be fit and fine!"*[39]
- **Manageable workload**: Women who have the time required for frequent breastfeeding (which can easily take 3-4 hours per day) are more likely to feed their children only breastmilk. This is more likely either in smaller families, where the women do not need to take care of too many people, or in families where other members are actively engaged in household tasks, such as cooking, cleaning, etc.
- **Possibility of staying near the child**: Women who either stay at home or work near their house are more likely to breastfeed exclusively, as it is easier for them to be with the child.
- **Frequent breastfeeding**: As was explained above, the more frequently (and effectively) a child is breastfed, the more milk the mother produces. As a result, women are less likely to think that they do not produce enough breastmilk. When a woman who breastfed her child exclusively was asked why she has not introduced other fluids or food in the first six months, she responded by saying that *"The child's stomach would be full, so there was no need to give food."*[40]
- **Availability and timely use of breastfeeding counselling**: Practical lactation counselling can help women overcome breastfeeding difficulties. It is essential especially for first-time mothers. However, it is important that the counselling is not only available but also used by the women who face difficulties. As a midwife explained: *"Some women don't tell us at* all [about the breastfeeding difficulties they have]. *Then, when we come for vaccination, we ask them if they are feeding* [breastmilk] *or not. That is when we come to know."*[41]
- **Breastfeeding without complications**: The fewer breastfeeding difficulties a mother faces, the more likely it is that she will be able to breastfeed exclusively.
- **Ability to extract milk and feed it later**: Some mothers and health workers reported that (a minority of) women who have to leave the house extract their milk, keep it in a cool place (for up to two hours) and the milk is then fed to the child by a mother-in-law using a spoon. At the same time, this practice can be recommended only if the milk can be expressed, stored and fed in a very hygienic / safe way.
- **Agreement of other household members**: Mothers who live in households whose members approve of feeding the child only breastmilk in the first six months and help them to do (e.g. by reducing their workload) are more likely to follow this practice.
- **Knowledge of the desired behaviour**: Many mothers and grandmothers were aware that the official recommendation is that until the age of six months children should receive only breastmilk.

[38] Discussion with Anganwadi workers, Jhulwaniya village, Barwani district

[39] Discussion with grandmothers, Kokinpada village, Nandurbar district

[40] Discussion with mothers, Bhulgao village, Barwani district

[41] Discussion with auxiliary nurse midwifes, Chabootra village, Khandwa district

3.3 Complementary Feeding

This chapter covers practices relating to an optimal start of complementary feeding, minimum meal frequency, dietary diversity and other important topics.

3.3.1 Complementary Feeding: Optimal Start

Promoted Behaviour: Starting at about 6 months, caregivers start feeding the child other foods in addition to breastmilk.

Barriers:

- **Perception that a child needs complementary foods earlier**: As was described in the previous chapter, some people think that children need to start eating foods earlier, otherwise they would be hungry (as breastmilk alone would not be enough). This means that from as early as 3-4 months of age, some children are fed biscuits, thin porridge, animal milk and other foods. It is important to keep in mind that some (grand)parents do not perceive these meals as 'foods'. When they are asked about when their child started eating 'foods', they usually mention the age of six months, because as 'foods' they imagine dhal, roti, rice, etc. Only further probing reveals that their child started eating less substantial foods (e.g. biscuits) already at an earlier age. This must be considered when developing SBC messages and when talking with (grand)parents about introducing complementary feeding.
- **Additional reasons for starting complementary feeding earlier** than at six months included the need to pacify the child (so that s/he stops crying), absence of the child's mother (mainly due to work), the need for the mother to have more time for work (as other household members can feed the child which 'frees' the mother's time), perception that certain foods protect the child from illnesses / boost the child's health, breastfeeding difficulties and influence of other household members. All of these factors were described in detail in the previous chapter of this report.
- **Child refusing to eat meals other than breastmilk**: Some interviewed mothers reported that their children (aged six months or even much older) were refusing to consume other foods / fluids than breastmilk. This was less prevalent in households where the mothers spent less time with the child (e.g. due to working in the fields). Generally, a delayed introduction of complementary feeding seemed to be considerably less common than an early introduction of foods / fluids.
- **Letting the child 'to decide'**: A group of interviewed fathers said that the start of complementary foods *"depends on how hungry the child is",*[42] indicating that they do not proactively start complementary feeding at the age of six months. If a child appears to be fine with breastmilk only, they might not introduce other foods / fluids at the recommended age. This was also confirmed by some Anganwadi workers who said that complementary food is often introduced only at the age of 7-8 months.[43]

Enablers:

- **Absence of the barriers / presence of enablers to exclusive breastfeeding**: Women who are able and willing to feed their child only breastmilk are more likely to avoid starting complementary feeding before the age of six months. The key barriers and enablers are described in the previous chapter.
- **Awareness (and even more importantly – belief) of optimal start of complementary feeding**: Women who are aware and who believe that complementary feeding should start at the age of six months are more likely to follow this practice. Many of the interviewed mothers were able to explain why complementary feeding should start at this age (not earlier, not later).
- **Annaprashan** is a traditional ceremony held in the Anganwadi centre to celebrate the initiation of complementary feeding, usually at a time when a child reaches six months of age.

[42] Discussion with fathers, Bhulgaon village, Barwani district

[43] Discussion with Anganwadi workers, Jhulwaniya village, Barwani district

- **High exposure to nutrition counselling / messages**: The interviewed health workers reported that frequent awareness raising and messaging about the optimal start of complementary feeding has resulted in more children starting to consume foods / fluids at the recommended age.[44]

3.3.2 Complementary Feeding: Meal Frequency

Promoted Behaviour: Caregivers feed children at least the minimum number of times each day (2 feedings per day for breastfed infants aged 6 - 8 months; 3 feedings for breastfed infants aged 9–23 months; 4 feedings for non-breastfed children aged 6 - 23 months).

Barriers:

- **Caregivers being too busy / absent / not giving enough attention**: When the mother is too busy at home, in the fields or when migrating for work and there is no other caregiver who would ensure that the child is fed well, the child might eat less frequently and/or consume smaller quantities of food. An Anganwadi worker explained that: *"Children these days don't eat easily. If the family is big, and if the child takes half an hour to eat, the mother can't give that much time. Then child doesn't eat."*[45]
- **Perception that complementary food is less needed when the child is breastfed**: Some respondents thought that when a (7 - 8 months old) child is breastfed frequently, the child's 'stomach is full' and s/he does not need to eat much by way of additional foods / fluids.
- **Lack of food in the household**: During some parts of the year (e.g. before harvest or when labour work is not available), some households have difficulties in securing enough food and this might negatively impact on the number of meals a child receives.

Enablers:

- **The absence of the barriers listed above** represents some of the main enabling factors.
- **Access to Take Home Ration (THR)**[46] is a major enabler to improved meal frequency, especially for the poorest households (respectively, those poor households who are able to access it).
- **Good awareness of the minimum meal frequency**: The interviewed mothers, grandmothers and fathers largely had a good awareness of the minimum number of times a child should consume complementary foods.
- **Offering food with different tastes**: An interviewed Anganwadi worked advised how parents can motivate a child to eat: *"Don't feed it food with the same taste. Give it food with different tastes. Or else the child won't eat it."*[47] Making the food more attractive to the child can be one of the enabling factors.
- **Reducing the amount of sweet foods**: Related to the previous point is a recommendation to avoid giving the child too many of sweet foods (including naturally sweet foods), as the child might then be reluctant to eat other types of foods.
- **Avoiding feeding tea / water before eating**: Another reported way of ensuring that the child is willing to eat is to avoid feeding too much fluid shortly before the meal. The child will then feel full and might not eat much of the offered food.

[44] Interview with midwives, Nandurbar town, Nandurbar district

[45] Interview with Anganwadi workers, Jhulwaniya village, Barwani district

[46] THR is a fortified supplementary food product provided by the Indian government for children aged 6 months to 3 years and for pregnant and lactating women. Details on THR is available in Sight and Life's publication available at this link.

[47] Interview with Anganwadi workers, Jhulwaniya village, Barwani district

3.3.3 Complementary Feeding: Protein-Rich Foods

Promoted Behaviour: Caregivers feed children aged 6 - 23 months any suitable type of protein-rich foods (also referred to as 'body-building' foods) every day.

Note: Considering that children eat very similar types of protein-rich foods as women do, the barriers that were already described in chapter 3.1.2 are not explained here in detail.

Barriers:

- **Poverty** – see chapter 3.1.2. Among the most affordable sources of protein for young children are legumes and to a lesser extent eggs and milk; on the other hand, paneer, curd and different types of meat (if consumed) tend to be less affordable / available. At the same time, for some households, even accessing legumes to prepare dhal can be difficult. An interviewed mother explained: *"What do we labourers do! We don't even get dhal-roti properly, what can we do ..."*[48]
- **Cultural or ethical preferences** – see chapter 3.1.2.
- **Discouraged foods**: The only protein-rich food that the parents frequently reported not feeding to their young children was fish, due to the risk of bones hurting a child.
- **Limited awareness**, of what foods children's bodies need to thrive exists especially among fathers. When it comes to children's nutrition, it appeared as if the primarily focus is on ensuring that children are not hungry. There was a perception that 'if they are not hungry, they should be fine'. According to an interviewed father: *"if the child eats till his stomach is full, then the child will surely be healthy."*[49] At the same time, this is also decided by a household's economic situation. When a father was asked about foods that make a child smart, he responded by saying: *"Eating a chilli with roti will also make him smart … Yes, because we cannot provide anything better than this, we can feed what is available. For the smallest expense we go out to work so we cannot do any better."*[50]

Enablers:

- **The absence of barriers listed above** represents the main enabling factors.
- **Desire for a child to thrive**, grow well and be smart is among the strongest enablers and many parents are doing what they can to achieve it.
- **Good awareness** among *some* mothers and grandmothers of which foods are rich in protein / good for child's growth, such as milk, eggs, meat and legumes.
- **Knowledge of meals and snacks that are rich in protein**, are very low-cost and popular among children increases the likelihood of children consuming protein-rich foods. This point is very important, as poverty is the key barrier to improved consumption of protein-rich foods. Various types of dhal and millet is an example of such a meal.
- **Fathers willing to spend money on protein-rich foods**, as opposed to other competing needs. This also includes purchasing protein-rich snacks (such as milk or eggs) instead of various biscuits, chips and other 'junk food', especially considering that fathers do most of the shopping.
- **THR rations** have a good source of protein, so accessing THR is another enabling factor.
- **Social networks** – see chapter 3.1.2.

[48] Discussion with mothers, Itwamaal village, Khandwa district
[49] Discussion with husbands, Chabootra village, Khandwa village
[50] Discussion with husbands, Chunabhatti village, Barwani district

3.3.4 Complementary Feeding: Vitamin / Minerals-Rich Foods

Promoted Behaviour: Caregivers feed to children aged 6 - 23 months any suitable type of vitamin / mineral-rich foods (also referred to as immunity-boosting foods) every day.

Note: Considering that children eat very similar types of vitamin / mineral-rich foods as do women, the barriers that were already described in chapter 3.1.3 are not explained here in detail.

Barriers:

- **Lacking access**: Poor access to vitamin / mineral-rich foods – see chapter 3.1.3. As the Gram Panchayat Secretary summarized: *"The family that is better-off, will eat vegetables, and those who are from poor classes, they will have a chilli with their roti."*[51] Fruits (which must be purchased) are a more expensive source of vitamins than minerals.
- **Food habits** (see chapter 3.1.3) resulting in some households not being used to incorporating vegetables in their daily meals.
- **Children's preferences** – according to some respondents, while children might like eating fruits, they are less keen on eating vegetables. They often prefer just to pick a roti or biscuit.
- **Food taboos**: Fruits and vegetables that are considered as 'cold foods' might be avoided, especially when children are ill (as they are believed to cause colds). These include raw mango, tamarind, lemon, custard apple, rice, carrots and reportedly also some types of dark green vegetables. While young children might naturally avoid eating sour fruits, the question of rice, carrots and some types of dark green vegetables should be investigated further (note: the most frequent types of dark green vegetables, such as spinach and fenugreek leaves, are fed to children).

Enablers:

- **The absence of the barriers listed above** represents some of the main enabling factors.
- **Accessibility of vitamin / mineral-rich foods** - see chapter 3.1.3. Multiple respondents said that households which grow vegetables / fruits are more likely to eat them (primarily during the rainy season), compared to those who have to buy them.
- **Popular meals that contain minerals / vitamins** - see chapter 3.1.3. Some respondents reported enriching traditional meals (such as dhal) with vitamin-rich plants, such as various green leaves.
- **Belief in the importance of vitamins and minerals** - see chapter 3.1.3.
- **Possibility of sharing low-cost recipes** popular among children among mothers / grandmothers.

3.3.5 Complementary Feeding: Other Findings

- **Types of Complementary Foods**: Among the most commonly mentioned foods given to young children were porridge (daaliya), rice pudding (kheer), sweet desert (halwa), sweet and salty biscuits (sometime mixed with milk), animal milk (goat, cow, buffalo), lentil water, dhal, soft roti (mashed or mixed with dhal / milk / tea), toasted bread, rice mixed with lentils (khichadi), freshly fried or packages of flour-based snacks (e.g. gaathiya, wafers, Kurkure), dried fruits (e.g. dates), vegetables, dried coconut and nuts crushed into a paste. It was frequently said (and observed) that children eat snacks from shops (biscuits, crackers, sweets) which have only limited nutritional value. An interviewed mother said that *"We should look after the children and not give them all this packaged food."*[52] This is less the case in poorer households which could not afford buying snacks and relied on food prepared at home.

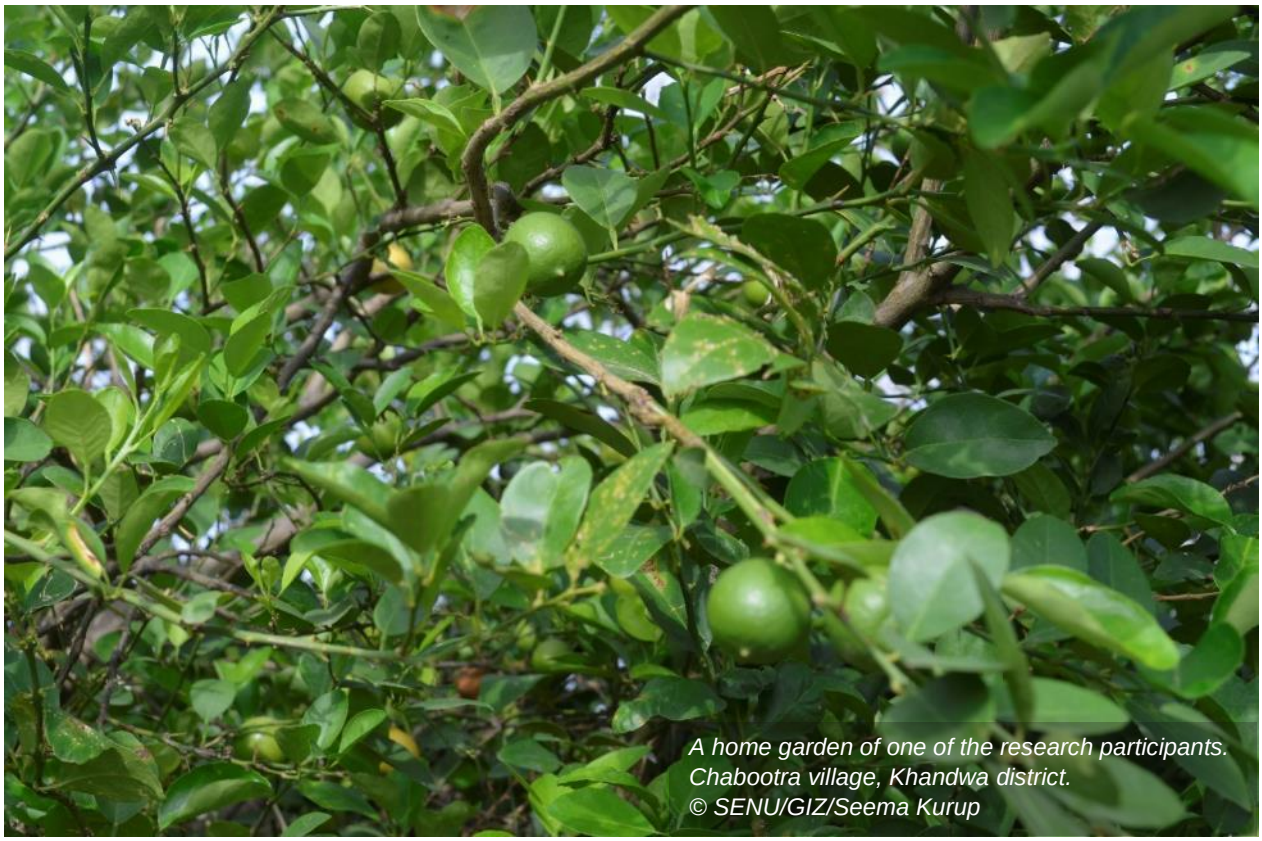
[51] Interview with Secretary Gram Panchayat, Itwamaal village, Khandwa
[52] Discussion with mothers, Kakoda village, Khandwa district

- **Palatability**: There was wide agreement that spicy foods should not be fed to children, at least until the age of one year. An interviewed father said that: *"If they eat the spicy food prepared for us ... it might cause diarrhoea ... or* [they] *might fall sick ... or something might go wrong. … They start eating all foods once they are 12 months old."*[53] At the same time, some respondents believed that from the age of one year, children should be getting accustomed to eating spicy foods, so that they can eat the same meals as do the adults.
- **Special Meals for Children**: In the studied areas, it is not common to prepare separate meals for young children. Most families only reduce the salt and spices but otherwise feed young children largely the same meals as they eat. According to an Anganwadi worker, *"They do not cook anything special. Whatever is available in the house is given to the child … there is no such family in the entire village that cooks separately for the child ... whatever is cooked in the house is fed to the child ... even if they have time, the women here will not make* [a special meal for the child]*!"*[54] This is primarily due to lacking time and due to not seeing a strong reason to prepare a special meal for a child. According to an interviewed Anganwadi worker*, "Mostly this community says: 'My child is able to eat what is cooked, so why make something separate'"*.[55]
- **Food Consistency**: When mothers were asked about the optimum consistency of meals that are fed to young children (aged 7–8 months), they frequently responded that the food *"… should be medium. It should not be too thin or too thick."*[56]
- **Active Feeding**: The study showed different ways in which young children are fed. A midwife explained that *"Some women, what they do is, they keep a bowl of rice in front of the child. Now how will the child eat it? The child will eat a bit and then throw it all around. Then in such conditions, children become weak. But if there is a sensible mother, then she'll make the child sit and feed the child ... with their own hands."*[57] While knowledge of effective child feeding practices is important, it is likely that the main reason why mothers do not actively feed their young children is the lack of time. An ASHA worker described this common situation by saying that: *"If we give food and we get busy with something else then if the child is eating half of it and dropping the rest then how the child will be able to eat well!"*[58] With regards to the timing of feedings, most women reported that they feed the child when s/he starts crying – i.e. not at regular times.
- **Own Bowl**: Many respondents reported that the child's food is given to a separate bowl. Some Anganwadi centres give bowls for children during the Annaprashan ceremony.
- **Food Hygiene**: Young children usually eat using their own hands or are fed by hand by the caregivers, indicating a need to promote handwashing for caregivers and children before eating / feeding.
- **Food Taboos**: For description of beliefs related to which foods should not be given to young children, see chapters 3.3.3 and 3.3.4.

[53] Discussion with fathers, Chabootra village, Khandwa district
[54] Discussion with Anganwadi workers, Kotwadiya village, Khandwa district
[55] Discussion with Anganwadi workers, Kakoda village, Khandwa district
[56] Discussion with mothers, Itwamaal village, Khandwa district
[57] Discussion with midwives, Chabootra village, Khandwa district
[58] Interview with ASHA workers, Kakoda Village, Khandwa district

3.4 Homestead Production of Vegetables / Fruits

Promoted Behaviour: Household members have a home garden and grow at least four types of nutrient-rich vegetables / fruits for homestead consumption in it during the rainy as well as dry season.



A home garden of one of the research participants. Chabootra village, Khandwa district. © SENU/GIZ/Seema Kurup

Barriers:

- **Existing customs**: The GIZ project targets very diverse areas. While in some areas it is common to grow vegetables, in other where people used to depend primarily on hunting and gathering, the idea of having a homestead vegetable garden is a relatively new concept. Traditionally, people were not used to growing vegetables and introducing such a new practice requires influencing the way people think about their livelihoods and access to food.
- **Limited need to have a home garden**: Families who grow vegetables in their fields only have limited incentive to grow them in a home garden as well. Such families can have very good access to vegetables even without having a home garden. As a group of mothers explained *"they plant at farms, not at home."*[59] A Sarpanch from another village summarized the situation in his village by saying that *"most of these vegetables are grown in fields* [as opposed to home gardens]*."*[60] Of course, this concerns only households which have agricultural land.
- **Lack of water**: Lack of water for irrigating crops is among the main barriers to producing vegetables. According to an interviewed husband: *"We have baadi* [home garden] *only during monsoon … Till the rains were there it was green. Afterwards it dried up."*[61] Another respondent summarized the situation by saying: *"It's like this madam: If there is even a bit more water then we can grow anything ... If there*

[59] Discussion with mothers, Itwamaal village, Khandwa district

[60] Interview with a sarpanch, Khandwa district

[61] Discussion with husbands, Chabootra village, Khandwa district

is no water, then what can be done?"[62] These statements describe the situation of many households targeted by GIZ's project. Many households even face difficulties to accessing enough water for drinking, hygiene and other basic needs. The exceptions are households which have water from a well (or other source) or which grow vegetables on a very small scale using grey water.

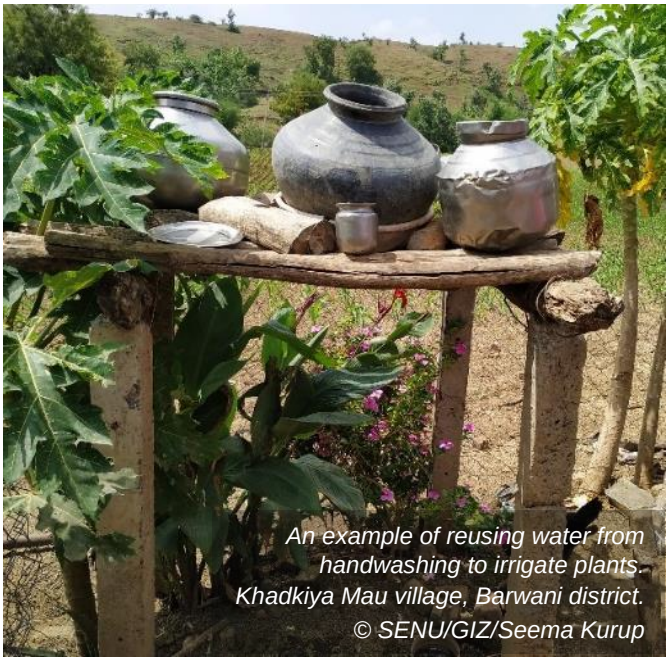
- **Lack of space**: Another frequently stated barrier to having a home garden is lack of space near people's houses where they could be used to cultivate even a small amount of vegetables.
- **Lack of time**: Cultivation of vegetables, even if done on a smaller scale, is a relatively time-consuming task. According to a wide range of interviewed respondents, most of the work on maintaining home gardens is often (not always) done by women who have many 'competing' priorities. Other household members might also be busy with other tasks, such as farming or labour work. This means that sometimes they do not have the time (or energy and motivation) to establish and take care of a homestead garden.
- **Migration for work**: Many households from the targeted areas migrate for work which means that they are unable to take care of a home garden.
- **Pests / diseases / browsing livestock**: Other reasons that discourage people from having a home garden are pests and diseases that affect the plants, as well as livestock which eats / damage the plants. An interviewed father said that *"We don't plant much here, as the goats and other animals come and eat them* [vegetables]*, and insects infect them."*[63] An Anganwadi worker explained that *"If somebody has a safe place then they plant ... otherwise cattle come and eat it all up … Those whose house is by the road, they too don't plant, madam … Because animals* [who walk on the road] *bother them."*[64] Lacking fencing (or the costs / efforts to establish it) that would protect vegetables from roaming cattle was among the most frequently stated reasons for not having a home garden.
- **Lacking inputs**: Access to vegetable seeds, fruit three saplings, fertilizers, pesticides and other inputs is an essential pre-condition for having a home garden. While 'lack of inputs' is commonly stated as a key barrier to growing vegetables, the research showed that, compared to the barriers listed above, access to inputs is a less problematic factor. This might be because people are used to preserving seeds from the previous season, purchasing small volumes of seeds only (if available in the market) and using other low-cost methods (e.g. natural fertilizers). At the same time, for poorer households with no experience in having their own garden, the perceived or real costs of inputs might act as an influential barrier (especially for more expensive inputs, such as fruit tree saplings).
- **Lacking advice**: An agricultural extension officer covers 12 - 15 villages which means that the time s/he can dedicate to supporting homestead production of vegetables is very limited. The focus is primarily on larger-scale farming, which results in households having very limited access to timely advice relating to small-scale production of vegetables / fruits. On the other hand, many households have members with years-long experience of growing crops (e.g. at their farms or elsewhere) and therefore do not see their agronomic know-how as a barrier to growing vegetables. According to interviewed mothers: *"We have small farms so we know this."*[65]

<u>Enablers</u>:

- **Absence of the barriers listed above** represent the main enablers to homestead production of vegetables / fruits.
- **Easy access to cheap vegetables / fruits**: The idea of having access to fresh vegetables and fruits at very low (if any) financial costs is among the main motivators for having a homestead garden.

[62] Discussion with husbands, Itwamaal village, Khandwa district
[63] Discussion with husbands, Bhulgaon village, Barwani district
[64] Discussion with Anganwadi workers, Kakoda village, Khandwa district
[65] Discussion with mothers, Itwamaal village, Khandwa district

- **Willingness to use grown vegetables / fruits for homestead consumption**: Among the respondents there was wide agreement that any vegetables and fruits grown are used for homestead consumption, only surplus is sold. This means that households are motivated to use their produce for ensuring good nutrition.
- **Engagement of more household members**: Households where more members are willing and able to help with growing vegetables are more likely to maintain homestead gardens, as the workload can be shared among several people.
- **Experience of positive examples**: The possibility to see inspiring examples of small-scale, fully replicable home gardens where vegetables are also grown during the dry season (e.g. by using grey water – see photo) is likely to be a strong motivator. People can see that (small amounts of) vegetables can be grown even during the dry season and they might be willing to replicate such examples in their own houses.
- **Reducing the scale of a home garden**: An agricultural extension worker recommended that during the dry season people adjust the size of their home garden to the amount of water they can secure.
- **Encouraging the growth of vines**, such as various gourds, which do not take much space (since they go up) and were frequently mentioned during the interviews.



An example of reusing water from handwashing to irrigate plants. Khadkiya Mau village, Barwani district.
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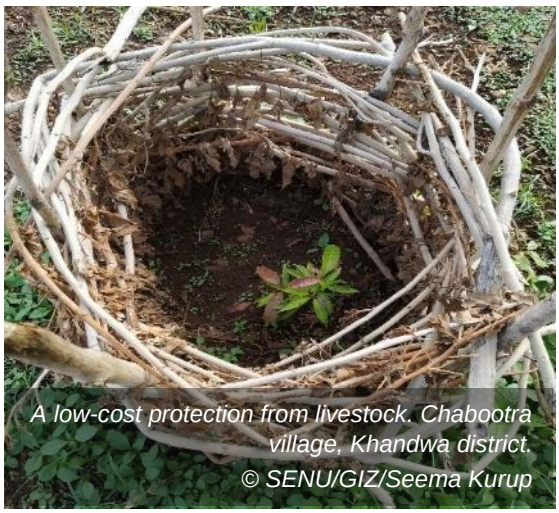
- **Collaboration with others on accessing inputs and advice**: Some of the barriers, such as access to inputs and advice, can be overcome more easily if people collaborate with others. For example, an individual might not be always be able to travel to a town to receive agronomic advice from Krishi Sahayak (agriculture extension worker). Similarly, s/he might not be able to buy a few dozen seeds only. However, by collaborating with others, inputs and timely advice can become more accessible.
- **Knowing how to use low-cost inputs**: Agricultural inputs, such as seeds, pesticides, fertilizers or fencing can be expensive. However, some farmers are able to come up with low-cost alternatives, such as fencing made of branches / thorny bushes (see photo) or locally prepared pesticides and fertilizers. Knowing how to use such low-costs inputs can make it easier for people to establish and maintain their own home garden.
- **Cultivation of quickly maturing vegetables**: Cultivation of quickly maturing vegetables makes it easier for households to produce more vegetables within the relatively short period when sufficient amounts of water is available (about 6 months per year).



A low-cost protection from livestock. Chabootra village, Khandwa district.
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3.5 Handwashing

This chapter covers two intertwined practices: ownership of a handwashing station with water and soap readily available and washing hands with soap at the critical times.

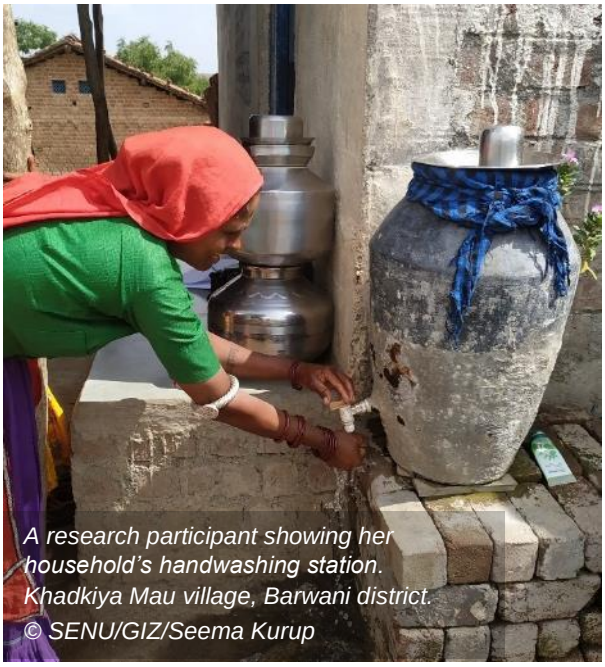
3.5.1 Ownership of Handwashing Station

Promoted Behaviour: Households have a dedicated handwashing station with water and soap readily available.

Note: Giving the nature of the findings, the findings below are not divided into specific barriers and enablers, as is used for other behaviours.

Findings:

The research showed that most households seem to have a dedicated place for washing hands. The most common place is near the house entrance, so that people can wash hands (and feet) before they enter the house - i.e., it is used primarily when coming from outside. It usually consists of a water container and a jug / cup / tap that is used to pour water (see photo). Such places often do not have soap. This is due to its cost; the preference to keep soap inside the house (to protect it from children or animals); and limited perceived importance of using soap for frequent handwashing. Soap is more frequently available in the bathrooms which tend to be located behind the house. However, bathrooms are seen primarily as a place where people bath themselves and are not necessarily the place where they would go whenever they need to wash hands. This set-up is perceived by many as sufficient and people do not necessarily see a reason for doing things differently.



A research participant showing her household's handwashing station. Khadkiya Mau village, Barwani district. © SENU/GIZ/Seema Kurup

Therefore, instead of a general promotion of the behaviour stated above, GIZ might consider focusing on two more specific behaviour change objectives:

1) **Availability and use of soap** at those places where people usually wash their hands (irrespective of where the place is or how it looks). This would take advantage of an already established practice of washing hands but would ensure that they are washed using soap.
2) **Availability of water and soap for handwashing in the kitchen**: Among the most important times for washing hands is before eating, handling food and feeding children. These are occasions when bacteria can contaminate food. Since all these activities are mostly done in the kitchen, it is important that caregivers especially can easily wash their hands with soap. The observations conducted during the research have identified a positive practice of using a small vessel with water in the kitchen for washing hands. Its immediate availability increases the likelihood that people wash their hands at these critical moments, as they do not need to make the effort to go elsewhere. The project could take advantage of this positive practice and promote it across its target areas.

The key enablers to these two behaviours are similar as in the behaviour described below.

3.5.2 Handwashing with Soap

Promoted Behaviour: Household members wash their hands with soap at the critical times.

Barriers:

- **Lacking soap**: As was described above, some households have a handwashing station but with no soap available. This can be due to its costs; need to protect it from children or animals; or the perception that is not necessary to always use soap for washing hands.
- **Forgetfulness**: People sometime do not wash their hands (at all or with soap) simply because they forget to do so. This simple reason is very common even in more economically developed contexts and should not be underestimated.
- **Location of handwashing station**: As was explained above, the handwashing station is not always located where it is needed the most (e.g. near the kitchen or toilet). This means that in order to wash hands, people need to make the effort to go the nearest handwashing station, which might discourage them.
- **Preference to save water**: During the dry season, some household members (especially women) have to expend lots of time and physical effort in order to bring water. Frequent hand washing can then be perceived as a waste of precious water. An interviewed mother shared her experience by saying: "*My mother in law shouts at me if I wash my hands often … She scolds me for wasting water ... again and again … they are old people so they will not change.*"[66]

Enablers:

- **The absence of the barriers above** represents some of the main enabling factors.
- **Proximity of the handwashing station**: The easier it is for people to access a handwashing station with soap (and to remember to wash their hands), the more likely it is that they will do so.
- **Belief** that it is important to wash hands with soap, as it reduces the risk of diseases.
- **Disgust** resulting from the idea of not washing hands after defecation or before eating / perception that it is not acceptable not to wash hands at the critical moments.
- **Concerns related to Covid-19**: The Covid-19 pandemic has contributed to increased handwashing rates, as people wanted to reduce the risk of contracting the virus.

[66] Discussion with mothers, Nagsar village, Nandurbar district

3.6 Crosscutting Topics

This chapter covers three main crosscutting topics: the role of different household members in ensuring good child nutrition, intrahousehold sharing of food and the practices of positive deviants.

It is important to emphasize that gender inequalities are a major barrier to practicing many of the practices described above. Women who are more educated and have better decision-making opportunities are more likely to practice the desired practices. Since GIZ has conducted a separate study mapping the impact of gender inequalities on maternal and child nutrition, this research has not covered this topic extensively. However, it must be considered when addressing the key barriers and enablers.

3.6.1 Roles of Household Members in Ensuring Good Nutrition

The research has explored the roles which the following household members play in ensuring good nutrition to children aged 0 - 23 months:

- **Mothers** are responsible for preparing foods, feeding their children and taking them for health checks. They are the primary caregiver.
- **Fathers** are responsible for ensuring that the household produces enough food and/or earns enough money to buy food. According to the Gram Panchayat Secretary *"It's the man's job to ensure that the food is present in the house".*[67] This is also the main reason why the amount of time they spend with their children is relatively low, as they are busy with work away from the house. According to an interviewed husband, *"the father, poor man, is busy earning a livelihood! ... he can't be with the child."*[68] In the first six months of a child's life, their involvement is very limited. In the following months, they do shopping and buy various (largely unhealthy) snacks for children at the local shops. Some fathers also feed their children though this is less common. They have the main say in the types of crops that are grown and the types of foods that are purchased. Their opinions regarding child nutrition are often influenced by what their mother thinks.
- **Grandmothers** have the biggest influence on child's nutrition, aside from mothers. They are actively involved in the choice of meals that will be given to a child, they supervise how often a child eats and influence breastfeeding practices (see chapter 3.2). When mothers are away from home, they take care of the child, which also includes choosing what meals / snacks / fluids a child receives and how often. Some grandmothers also reportedly scold their daughters-in-law when they do not feed the children in a way which is good for them. Considering the amount of time that parents spend out of the home and the authority that mothers-in-law have, their influence on child nutrition is significant.
- **Grandfathers** play a more limited role in ensuring child nutrition. They play with children, supervise them and sometime purchase snacks for them from the local shops.
- **Older children** help with taking care of the children when parents are away or busy. This might also include feeding the children. According to an interviewed mother, *"if they* [siblings] *are between 6 - 10 years of age, they can take care of the babies."*[69]

3.6.2 Intrahousehold Sharing of Food

The research found that the common perception that men eat first and get the best food is only partially correct, as the reality is more complex:

- In many households, people do not eat together at the same time, as they tend to be busy with various tasks (e.g. working in the fields or having other commitments). Therefore, in the case of

[67] Interview with Secretary Gram Panchayat, Itwamaal village, Khandwa district

[68] Interview with husbands, Itwamaal village, Khandwa district

[69] Interview with mothers, Bhulgao village, Barwani district

such households, the question of who eats first is less relevant. As an interviewed mother explained: *"Everyone eats separately. Someone feels hungry at certain times, some don't."*[70]

- In other households, elders eat first (and not together with their daughter-in-law) but it does not necessarily mean that the daughter-in-law eats less / poorer quality of food.
- Some respondents acknowledged that the daughter-in-law is the last one to eat and might have a limited access to food, saying that *"She eats what is left ... what she wants she may get, if she asks ... but she may feel shy to ask for more."*[71] The main reason why the daughter-in-law eats last is because she is usually responsible for serving the others first.
- In terms of the food quality, many respondents (both male and female) rejected the idea that women would automatically receive lower-quality foods, compared to, for example, their husbands.
- A group of interviewed mothers said that men do eat more than they do, because *"They go out to work, they do a lot of work outside…so they feel hungry."*[72]
- Children were repeatedly reported as eating first (or after the in-laws were served food).

3.6.3 Positive Deviants

In the context of the research, positive deviants are people who manage to ensure good maternal and child nutrition, despite facing similar challenges to those of their peers. Considering the number of topics covered by this research, the interview and observation time that could be dedicated to this topic was relatively limited. Despite this constraint, the research managed to identify the following positive deviant practices:

- **Avoiding unhealthy snacks:** Across the research areas, it is common for the caregivers (especially fathers and grandparents) to purchase biscuits, wafers, sweets and other largely unhealthy snacks in the local shops. According to an Anganwadi worker, *"they buy things from the market and eat but their stomach does not get filled from it ... they eat things like KurKure* [packaged salty corn puffs]*, so the kids then get weak."*[73] Some families try to avoid buying such snacks, replacing them with healthier foods prepared at home (however, for many families this is also because they lack the money to purchase snacks with).
- **Ignoring food taboos:** Some households are less likely to follow the various food taboos described in this report and are open to eating a greater variety of foods. This can be due to not believing in the taboos but also for economic reasons (not being able to avoid eating some foods).
- **Active feeding:** Parents who sit with their children and feed them / supervise that the child eats the provided meal were reported as another example of positive deviants.
- **Focusing on meal frequency:** Anganwadi workers highlighted parents who put a special emphasis on the ensuring that their child eats the required number of meals. One of them explained that *"Even if they go to work, they tell to the one who is there to take care of the child that they have to feed the child. They feed them."*[74]
- **Avoiding giving too much tea / fluids before eating**, so that the child is interested in eating the provided meal.
- **Reducing the amounts of provided sweets**, so that children are willing to eat 'normal' staple foods.

[70] Discussion with mothers, Itwamaal village, Khandwa district
[71] Discussion with Anganwadi workers, Kotwadiya village, Khandwa district
[72] Discussion with mothers, Dhirajgaon village, Nandurbar
[73] Discussion with Anganwadi workers, Barwani districts
[74] Discussion with Anganwadi workers, Kakoda village, Khandwa

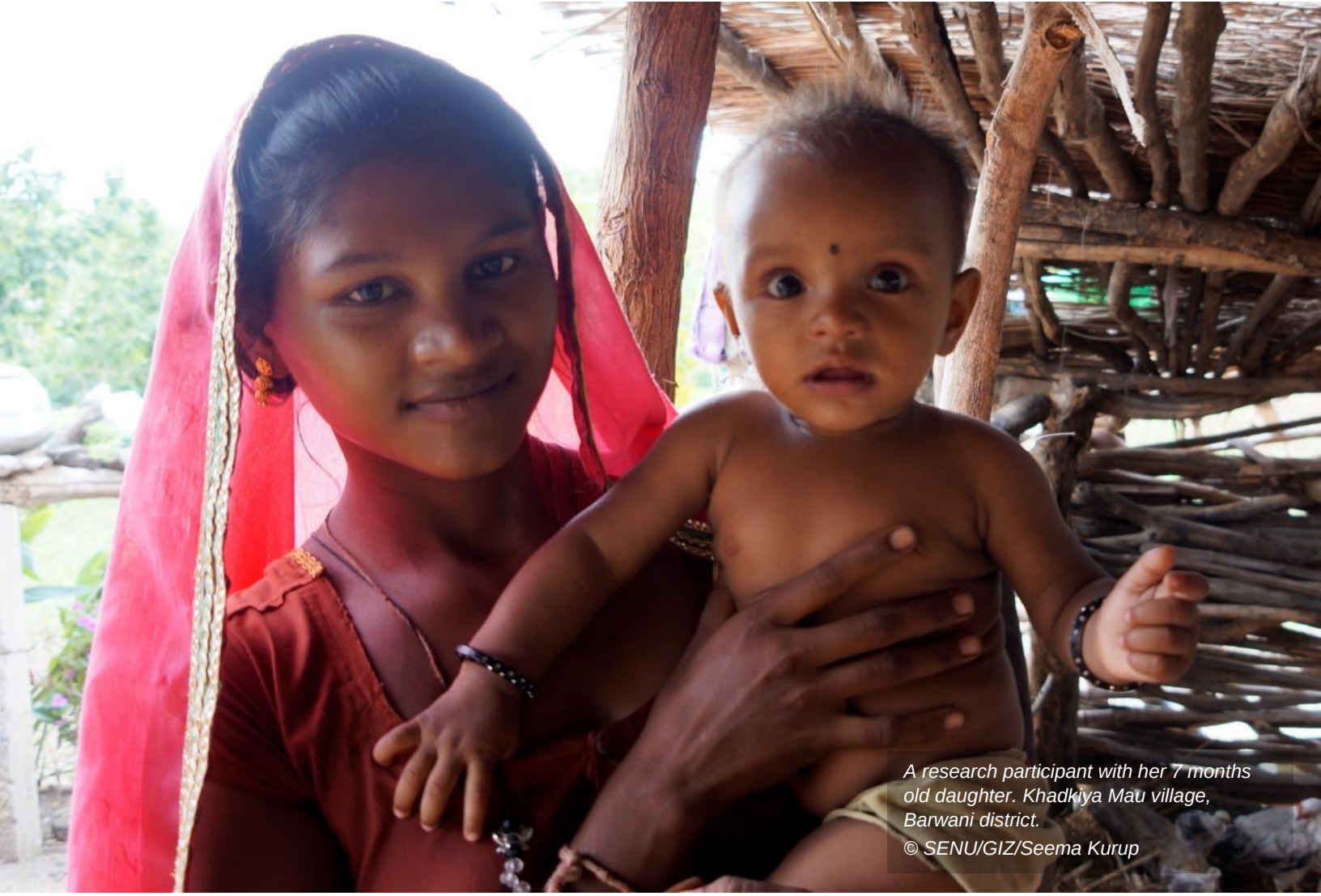
4. ANNEXES

Annex 1: Overview of Conducted Interviews and Observations

Overview of Interviews, Observat

Annex 2: Questionnaires and Observation Forms

The English version of the questionnaires and observation forms used during the research are provided at this link.



A research participant with her 7 months old daughter. Khadkiya Mau village, Barwani district.
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