

### 8.1 INTERVIEWS WITH SURROGATE CARETAKERS

In the in-depth interviews, it became clear that women frequently employed surrogate caretakers when they were occupied with household tasks or engaged in cultivation or trading.

*Generally, I get someone else to look after him when I go to the pump or above all when I go to the market.*

Mother of a well-nourished 5-month-old boy, Sevaré (urban)

*My mother-in-law looks after him constantly when I cook or when I pull water—generally when I am out of the house.*

Mother of a well-nourished 9-month-old boy, Boré (rural)

Surrogate caretakers among the better nourished children were generally a woman's older daughter(s) or, in urban cases, unrelated co-renters, neighbors, or maids. More rarely, women's co-wives, co-resident sisters-in-law, or women's mothers were cited as surrogate caretakers.

*In addition to me, it is her older sisters who look after her.*

Mother of a well-nourished 9-month-old girl, Boré (rural)

*Her sister and the mother of my friend who lives in the same compound regularly look after my child.*

Mother of a well-nourished 9-month-old girl, Sevaré (urban)

*The maid looks after her if I have to cook or if I have to go out.*

Mother of a well-nourished 10-month-old girl, Mopti (urban)

Among the malnourished children, older female family members and, in particular, children's paternal grandmothers were cited as principal surrogate caretakers and were often responsible for complementary feeding. Women's own mothers often helped with child care if they lived close by.

*In addition to me, it is my mother-in-law who looks after the child. She gives her food and traditional medicines.*

Mother of a malnourished 9-month-old girl, Boré (rural)

*Her grandmother carries her on her back. She gives her something to eat if I leave some cobal.*

Mother of malnourished 11-month-old girl, Sevaré (urban)

*My mother looks after the child if I am occupied with household tasks. I take my child to her house.*

Mother of a malnourished 11-month-old boy, Sevaré (urban)

Paternal involvement seemed more forthcoming among the well-nourished children, with infants' fathers babysitting or actively caring for them when the mother was unavailable.

*Because her father works, he can only help at the end of the day, so he looks after the child while I am cooking.*

Mother of a well-nourished 8-month-old girl Sevaré (urban)

*His father looks after him in addition to me. He feels that it is his duty.*

Mother of a well-nourished 12-month-old boy, Sevaré (urban)

In contrast, among malnourished children in rural areas in particular, paternal involvement was minimal and construed as culturally unacceptable.

*Here, in our community, fathers don't do anything to look after their children.*

Mother of a malnourished 8-month-old girl, Boré (rural)

A pattern thus emerges among the mothers of the better nourished children in which their social relationship with the surrogate caretaker allows them to give the person in question directions on how to look after the child and to correct them if the quality of care was not to their liking. As described, their surrogate caretakers are often their other children, or their nieces or maids; that is, younger individuals who are beneath them in the age-based social hierarchy and over whom they can exert substantial social power.

*Under my advice, the maid gives her the medicines. I have a maid who is very reliable. She looks after the child very well along with my little sister. The maid gives her things to eat, but she follows the advice I give about the quantity and methods of storage.*

Mother of a well-nourished 3-month-old girl, Sevaré (urban)

A recurring theme among the mothers of malnourished children was that they appear to have little control over the way in which the surrogate caretaker looks after their child. In the cases of the youngest women, their mother-in-law sometimes took almost total control of the baby, leaving them simply to breastfeed.

*People like my mother and my sister (look after the child). No, I can't tell them anything because they know about children better than me.*

Mother of a malnourished 11-month-old boy, Mopti (urban)

*My mother-in-law gives the child things to eat. I don't give her any advice. She knows about these things better than me.*

Mother of a malnourished 12-month-old girl, Mopti (urban)

*My mother-in-law and my sisters-in-law look after the child whether I am here or not.*

Mother of a malnourished 10-month-old girl, Synda (rural)

## 8.2 OBSERVATIONS OF SURROGATE CARETAKERS

One can see significant differences in the type of care<sup>9</sup> received by well-nourished and malnourished children in Table 9. Among the youngest and oldest infants, those who were well nourished received less direct maternal care. In contrast, the very young children who exhibited poor nutritional status were looked after by their mother throughout nearly the whole observation. Thus, the sick or unhealthy status of the malnourished children creates a climate of dependency among them that requires that their mother be constantly close to them. Alternatively, their poor health status may mean that they are less content or comfortable with surrogate caretakers and require intensive maternal care, including breastfeeding.

Table 9: Percentage of observation time spent with specific caretakers, by nutritional status and age

Caretaker	Children 3-4 months		Children 5-6 months		Children 7 months +	
	Well nourished	Malnourished	Well nourished	Malnourished	Well nourished	Malnourished
Mother	67	91	58	58	57	66
Older sibling	4	1	16	2	13	0
Father	0	0	3	1	7	5
Cousin	0	1	1	14	5	1
Aunt	3	1	8	12	6	10
Grandmother	6	4	7	11	5	11
Other	0	1	3	0	2	1
No one	20	1	5	2	6	5

This link emerged in a statement of a mother of a well-nourished child in Boré who noted that during her child's last illness:

*She breastfed more than usual because she was really sticking around me. She played much less.*

Mother of a well-nourished 10-month-old girl, Boré (rural)

<sup>9</sup> "Care" was defined as a unit of observation during which an individual was actively intervening with the child (by playing or feeding for example) or was in a position to respond immediately to signs of distress or discomfort.

In addition, it was noticeable that the mothers of malnourished children often had no daughters who were of an age at which they could help with child care responsibilities. They lived in households where either the older children were boys or where no other surrogate caretakers existed. In this situation, they could not call on other children for help with other household tasks, so care of the child in question had to be combined with other domestic or field duties. It is possible that this combination of tasks may have compromised the quantity and quality of direct maternal care. Among all children, the difference in the amount of time spent in maternal or non-maternal care by nutritional status was statistically significant ( $p < 0.001$ ) at a high level. This result thus contradicts the second study hypothesis outlined above, which suggests that children looked after by surrogate caretakers are likely to be malnourished.

Further analyzes showed that better nourished children at the younger ages were more likely to be left alone because they had a sense of security and well-being and did not mind being left by themselves. As seen earlier, the proportion of observation time these children were left alone, by nutritional status, was statistically significant ( $p < 0.05$ ).

This table shows that those with better nutritional status spent a greater proportion of time in the care of their elder siblings (usually sisters), whilst those with poor nutritional status spent a greater amount of time with grandmothers and aunts. However, neither of these differences were statistically significant in the regression analyzes. It is primarily younger women who rely on aunts and grandmothers for child care; they are too young to have teenage daughters, and they are considered too young to know what is best for a child. If there is a trend here, it is most likely linked to the age of the mother.

Just as emerged from the women's verbatim statements, the observations found that fathers played a small but important role in looking after the healthier children when compared with those who were malnourished. The better nourished infants also had access to care from their fathers as well as from their older siblings.

### **8.3 MOTHERS' AND CHILDREN'S ACTIVITIES**

As in most African societies, children are carried on the mother's (or other caretaker's) back, usually until weaning. Thus, the mother can carry out additional tasks whilst looking after her child and pausing to breastfeed on demand. However, sleeping babies may be placed on the ground in the wrap-around used to tie them on the mother since constantly carrying a child does make the mother's task (such as pounding millet or cultivating) rather arduous. This practice means that children are moved around considerably and found in many different locations.

The observations found some striking differences in the location of the well-nourished and malnourished children during the observation time (see Table 10). Well-nourished children at the younger ages spent considerably more time in their own homes than did those who exhibited poorer nutritional status. The latter were more likely to be found in the village (for example, while the mother fetched water or condiments), in the field (while she cultivated), or at the market (while she conducted petty trading).

Most probably, these findings stem from two relationships. First, malnourished children are likely to be more clinging or demanding and require constant maternal attention, making it difficult to leave them behind. Second, these women often lack surrogate caretakers at home in the form of older daughters and are obliged to have their infant accompany them when they work. Differences

in the proportion of observation time that well-nourished and malnourished infants spent in and outside their homes was statistically significant at a high level ( $p < 0.001$ ).

Table 10: Location of child during observation (percentage), by nutritional status and age

Caretaker	Children 3-4 months		Children 5-6 months		Children 7 months +	
	Well nourished	Malnourished	Well nourished	Malnourished	Well nourished	Malnourished
Own home	90	26	98	71	81	80
Neighbor's home	1	3	1	3	3	6
Village	9	16	1	14	16	14
Field	0	30	0	11	0	0
Bush	0	2	0	0	0	0
Market	0	22	0	2	0	0

The observations indicate that there is no fundamental difference in the amount of time spent directly caring for the child (for example, playing, comforting, feeding) between the mothers of well-nourished and malnourished children. However, if only playing is considered, both sets of mothers spent an average of 1 percent of the observation time playing with their children. Thus, hypothesis 1, which suggested that the mothers of well-nourished children interacted with them more intensively, was not supported.

The mothers of malnourished children participated slightly more in social activities, but those of well-nourished children appeared to rest or relax alone for a greater proportion of the observation time. The mothers of the youngest well-nourished children were engaged in household tasks for a considerably longer period when compared with the mothers of the youngest malnourished children. However, the opposite trend was evident for older infants (who are likely to be more demanding and indeed heavier to carry around) because the mothers of malnourished children engaged in household tasks for a significantly longer percentage of the observation time than the mothers of well-nourished children. Mothers of malnourished children also spent more time cultivating fields.

Considering all children together, the mothers of malnourished children spent 25 minutes more engaged in household labor than the mothers of the well-nourished children did during the six-hour observation period. Regression analyzes indicated that this difference was statistically significant ( $p < 0.01$ ).

The observations did not discover any systematic differences in the activities of the well-nourished and malnourished children. Among the youngest children, those who were better nourished, breastfed, cried, and sat for a slightly longer time during the observation period. Interestingly, the malnourished children were attached to their mother's back for a longer duration at every age. This may indicate that the mother was engaging in household labor and, lacking social support, saw it as the most efficient way of looking after the child while continuing to work. In a regression analysis, the difference in the amount of time the well-nourished and malnourished children spent on their mother's back was statistically significant ( $p < 0.05$ ), with the latter spending 25 minutes more on their mother's back during the six-hour observation.

## 8.4 MANAGEMENT OF ILLNESS

Very little difference was found in the kinds of illnesses experienced by the two groups of children according to mothers' reports. A higher percentage of the mothers of the malnourished children (43 percent) reported that the child had experienced diarrhea as the last illness, compared with 23 percent of the mothers of the well-nourished children. However, 6 of the 33 well-nourished children were reported never to have been sick, compared with none of the 37 who were malnourished.

Table 11 shows the frequencies of last illnesses reported by the mothers of well-nourished and malnourished children.

Table 11: Last illnesses reported by mothers of well-nourished and malnourished children

Illness	Well nourished (N=33)	Malnourished (N=37)
Diarrhea	9	16
Fever/malaria	11	11
Teething	2	1
Skin problems (rash, boils)	1	3
Conjunctivitis	1	1
Cold	5	1
General aches and pains	2	-
Congenital (low birth weight)	-	1
Lack of traditional preventive medicine	-	1
Don't know	2	2
Never been ill	6	0

Regarding breastfeeding and giving water during the last illness, no differences in maternal behavior were evident among the two groups. Twenty-seven percent (9 of 33) of the mothers of well-nourished children said that they breastfed more during the illness episode, compared with 22 percent (8 of 37) of the mothers of malnourished children. Nearly half of each group said that they breastfed less because the child was lethargic or too weak to suckle.

*During the illness, I breastfed less because the child was refusing everything. I am telling you that she even refused water, which explains why she is so thin.*

Mother of a malnourished 10-month-old girl, Synda (rural)

*During the illness, she breastfed less because she did not have any appetite. She drank a lot of water because of her fever.*

Mother of a well-nourished 6-month-old girl, Boré (rural)

Some mothers of the better nourished children persisted with breastfeeding during illness even when the child was reluctant. These mothers noted that breast milk was the child's only source of nourishment and that the child needed to consume it to facilitate recovery.

*I breastfed a lot more during the illness because she could not eat anything else.*

Mother of a well-nourished 9-month-old girl, Synda (rural)

*During the illness, I breastfed more so that the child would not lose weight.*

Mother of a well-nourished 3-month-old girl, Synda (rural)

The data show that similar proportions of mothers gave their children more water when they were sick. If diarrheal illness is considered separately from other illnesses, then five mothers of malnourished children reported giving less water and ten mothers reported giving more water when compared with one and four mothers of the well-nourished children, respectively. The quantity of water was generally increased first to replace the breast milk that was not being consumed and second to reduce fever and heat from the body.

*I gave him water to drink at very regular intervals because he needed it. He couldn't breastfeed normally.*

Mother of a malnourished 12-month-old boy, Synda (rural)

*I gave her water all the time to avoid her mouth becoming dry and to try to lower the fever.*

Mother of a well-nourished 11-month-old girl, Synda (rural)

*I gave him more water because his throat was always dry and he was hot.*

Mother of a well-nourished 12-month-old boy, Synda (rural)

Thus, in answer to the fourth research question presented earlier, it can be concluded that mothers' behavior during the reported illnesses, including diarrheal disease, was usually appropriate in that breastfeeding was generally increased as well as giving water.

## **8.5 TREATING ILLNESS**

All the mothers except two treated the illness with traditional curative medicines, with only a handful giving allopathic medicines in addition.

*The illness was situated in his stomach . . . I put the traditional medicines in a calabash containing water for about six hours, and during this time, I made him drink the medicines and I washed him with them.*

Mother of a well-nourished 8-month-old boy, Synda (rural)

Mothers of malnourished children were often given advice by their mother-in-law or older women who often administered the treatment themselves.

*It is an illness that makes the fontanel dance all the time . . . My mother-in-law treated it with shea nut butter and potash.*

Mother of a well-nourished 6-month-old boy, Synda (rural)

Two mothers of malnourished children did not treat their infants, citing a lack of means. One gave up after finding a long line at the health center.

*I took him to the doctor yesterday, but there were a lot of people. He didn't stop crying, so I took him home before seeing a doctor. Today, the dispensary is closed, so I will go on Monday.*

Mother of a well-nourished 12-month-old boy, Sevaré (urban)

It is worth noting that mothers of well-nourished children were also more proactive in terms of illness prevention, speaking without prompting not only about the importance of hygiene but also of vaccination.

*To look after a child properly, a mother must care for him correctly by washing him, clothing him, breastfeeding him, and following up on his appointments for immunizations.*

Mother of a well-nourished 5-month-old boy, Sevaré (urban)

## **8.6 FEEDING DURING ILLNESS**

Among those children already receiving complementary foods before their illness, eight mothers of well-nourished children made their children a special dish to aid their recovery. Only one mother of a malnourished child did so. The dishes included fish soup, eggs, milk, and gruel and probably contributed substantially to the children's nutritional intake.

*I made him omelettes so that he would have a lot of strength to be able to fight off the illness.*

Mother of a well-nourished 7-month-old boy, Boré (rural)

*I gave him butter—butter gives health and eliminates a yellow matter that people with “kefi” vomit up.*

Mother of a well-nourished 6-month-old boy, Mopti (urban)

Generally, and not just when their children were sick, mothers of malnourished infants did not encourage them to eat if they did not want to. Elsewhere in Mali, it is commonly thought that a child who refuses food should not be forced to eat (Dettwyler, 1986; Castle, 1992).

*If she refuses, I just leave it because this means that she is not hungry.*

Mother of a malnourished 9-month-old girl, Boré (rural)

*When she refuses, I put her on my back and continue working.*

Mother of a malnourished 8-month-old girl, Boré (rural)

*If he refuses, I just leave it until he decides he wants to eat.*

Mother of a malnourished 8-month-old boy, Mopti (urban)



In contrast, the mothers of the well-nourished children were more proactive and encouraged their infants to eat even when they appeared not to be hungry.

*If he refuses, then I sing to him; I take him in my arms. Afterwards, he will eat.*

Mother of a well-nourished 10-month-old boy, Synda (rural)

*If she refuses to take in food, I try and encourage her to eat by coaxing her.*

Mother of a well-nourished 11-month-old girl, Synda (rural)

## 8.7 SOCIAL SUPPORT OPTIONS

Decisions about feeding and other issues related to child care are embedded in the social networks in which the mother is involved. The choices a mother makes about the time she devotes to her child or to other household activities are often governed by the availability of social support in her home or community. It became clear throughout the study that infant feeding and other aspects of child care are fundamentally linked to the social context in which they occur. Mothers with weak social ties or low social support may have difficulties in fulfilling their multiple roles as mothers, daughters-in-law, and spouses.

Elsewhere in both the developed and developing world, studies have indicated that mothers with poor social networks and social ties are associated with poor child nutritional status (Zeitlin et al., 1990; Myntti, 1993). The lack of practical and emotional support available to the mothers of malnourished children in particular emerged from the in-depth interviews in this study and may be a key contributing factor to their children's poor health outcomes.

*I am alone here with my husband, who spends all his time in the fields . . . I have nobody here at home. Sometimes my neighbors help me . . . I suppose they do their best, but they are only neighbors. I have no one to whom I can give my child except the neighbors and that's just for a short while anyway.*

Mother of a malnourished 7-month-old boy, Boré (rural)

*I have no one who can help except for my husband's sister . . . The others are never around.*

Adoptive mother of a malnourished 11-month-old boy, Mopti (urban)

*No one helps me because my sister isn't here and my mother is always ill.*

Mother of a malnourished 4-month-old boy, Synda (rural)

In contrast, mothers of well-nourished children cited numerous people they could call on for assistance.

*Toumani is in better health than other children because we look after him very well. He is well treated. (When he was ill) it was only then that I realized how much affection everyone had for him. Everybody was watching over him.*

Mother of a well-nourished 4-month-old boy, Sevaré (urban)

Literature from elsewhere in the developing world has noted the phenomenon of death clustering (Ronsmans, 1995; Zaba and David, 1996) whereby much of the mortality in a community is accounted for by a small minority of families. For example, in India, it was found that 12 percent of families accounted for more than 60 percent of the mortality in specific communities (Das Gupta, 1997). The mothers of malnourished children in Mali often appear to exhibit characteristics found among the malnourished children in those studies. That is, they are not proactive, do not closely monitor their children's health and growth, and often have low social support.

Furthermore, the mothers themselves often exhibit poor health outcomes. The mothers of the malnourished children were often not in good health themselves and often lacked the resources to seek appropriate treatment. Their own ill health is likely to have compromised the quality of care they were able to give their children and increased their reliance on surrogate caretakers.

*My mother and my husband's sisters look after the child. Since I got married, I have not been in good health. That's the main problem—I am always ill.*

Mother of a malnourished 12-month-old girl, Sevaré (urban)

The phenomenon of clustering also meant that these women were likely to have lost more than one child, resulting in reduced availability of older sisters as surrogate caregivers.

*I come from Libe, a village in Burkina Faso. When I got married, I lost each one of my pregnancies. I came to Soukoua here with my husband to get treated by the marabouts (religious clerics). After the treatment, we came to Mopti and never moved.*

Mother of a malnourished 11-month-old boy, Mopti (urban)

*During most of the day, the child is with me because his older sister who used to look after him just died.*

Mother of a malnourished 3-month-old boy, Synda (rural)