The study is organized around the following research questions:

- At what age do mothers give supplementary foods/liquids and why do they do it?
- What types of solids and liquids do they give to their children in addition to breast milk?
- What are the signs that a mother interprets as a child requiring supplementary food?
- How do mothers manage feeding during episodes of illness?

The study used a “contrast sample” (Bernard, 1995) for interviewing and observing mothers of children at the opposite ends of a ranking according to nutritional status. This is derived from methodologies coming out of the "Positive Deviance" literature (Zeitlin et al., 1990), which seeks to explain how some children can thrive when the majority are malnourished, and how some children come to be exceptionally malnourished compared with community norms. The study chose to employ direct questioning and observation since research indicates that mothers' recall of infant food consumption over a 24-hour period may be inaccurate.

### 4.1 Hypotheses

The study hypotheses were the following and focused on the best-nourished and worst-nourished children in each community as well as their mothers:

- Mothers of well-nourished children interact with them more intensively than do mothers of malnourished children.
- Children who are looked after by surrogate caretakers are more likely to be malnourished.
- Mothers of well-nourished children react to their infants’ cries by breastfeeding more frequently than mothers of malnourished children.
- Mothers of children who have a better nutritional status breastfeed for longer periods than mothers of malnourished children.

### 4.2 Study sites

The three study sites were located in the Mopti Region of central Mali (see map page 14). The rural sites were chosen because the principal investigators had already had some contact with these communities and had been warmly received by them. The urban sites were chosen to represent typical areas of the towns of Mopti and Sevaré. In these expanding urban areas, two types of immigrants predominate: landless and impoverished former rural inhabitants who seek better circumstances and educated government employees sent to Mopti under the new decentralization policy of the current government. Both of these groups differ from the typical long-term residents. The former rural residents may exhibit risky behaviors and characteristics predisposing their children to malnutrition, whilst the civil servants have higher levels of education and income than average. Higher education may be associated with children being better nourished. To gain a more typical picture of urban feeding practices and child care, the research team chose older, well-established neighborhoods for the study.
The region of Mopti has one of the highest prevalence rates of children with wasting and stunting according to the 1995-1996 DHS survey. The survey indicates that in the Mopti Region, 27 percent of children under three were wasted, 28 percent were stunted, and 41 percent were underweight compared with 23 percent, 30 percent, and 40 percent, respectively, at the national level.

**Rural Site I: Synda**

Synda is a small village of approximately 500 people of Dogon ethnic origin, most of whom belong to a subcaste of leather workers. Situated under a rocky outcrop 10 kilometers away from the market town of Douentza, the population relies primarily on millet cultivation in distant fields for subsistence. Women also practice petty trading and spin cotton for use by local weavers and dyers. The village has few resources and is characterized by heavy seasonal out-migration by men and unmarried women.

**Rural Site II: Boré**

The village of Boré comprises approximately 2,000 people who live in a settlement straddling the tarmac road approximately 100 kilometers north of the regional capital of Mopti. The village of Boré is populated mainly by Bambara people, even though most of the surrounding population is of Fulani origin. Unlike Synda, Boré has a primary school, a dispensary, maternity unit, a weekly market, and comparatively well-developed infrastructure.
Regular labor migration by young men to work in Cotonou, Benin, has brought funds that were used to provide communal financing of a piped water supply and a grinding mill. People appeared to live in nuclear family units rather than in extended family compounds, which is unusual for this region. Cultivation is primarily a male activity with women relying on petty trading for income generation.

**Urban Sites: Mopti and Sevaré**

The urban sites were the towns of Mopti and Sevaré, which together make up the administrative capital of the Mopti Region with a total population of more than 120,000 people of diverse ethnic origin. Mopti is the older site consisting of densely packed houses on a peninsular downstream of the confluence of the Niger and Bani rivers. Sevaré is a more modern urban conglomerate 12 kilometers away that houses many civil servants posted from Bamako with comparatively high levels of wealth and education. Both towns have lively markets in which many women practice market trading.