

Food Security for Equitable Futures

Qualitative Data Collection Overview

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Study Overview

This qualitative study investigates household food management strategies and experiences surrounding food access, daily food practices, and the consequences of food insecurity. This qualitative work is part of a broader project which explores how families navigate and respond to food-related choices and challenges in their everyday lives. Funded by UK Research and Innovation (UKRI), the project is led by Prof. Jasmine Fledderjohann. Longitudinal qualitative data were collected by three postdoctoral researchers Dr Swayamshree Mishra, Dr Ankita Rathi and Dr Charumita Vasudev, across two Indian states, Uttar Pradesh and Goa, to capture evolving household circumstances and practices over time. Fieldwork supervision was provided by PI Prof Jasmine Fledderjohann and Co-I Prof. Sukumar Vellakkal.

Field sites

Based on the in-depth knowledge and local connections of the Co-I (Prof. Vellakkal), both Uttar Pradesh and Goa were selected as field sites during the grant application stage. In part, this decision was based on feasibility considerations given the sensitivity of the research and the need for reliable access and permissions. Further, Goa was included because it is perceived to be an economically well-off state and is largely absent from existing food insecurity literature; however, the state's wealth masks the economic precarity experienced by intrastate migrants, who were the focus of our work in the state. Uttar Pradesh was identified as a critical context for study as a socio-demographically diverse, key agricultural site in India where food insecurity and poverty are especially pronounced.

In Uttar Pradesh, the field team, together with the PI and Co-I, identified and finalised both urban and rural districts close to where the partner institute was based. In Uttar Pradesh, a local contact supported the team in identifying households across four districts. In Goa, data collection took place in migrant neighbourhoods of South Goa. Introductions from local contacts facilitated access to several neighbourhoods; from these, two to three key neighbourhoods were selected. These purposive sampling methods were paired with snowball and random sampling in order to capture a diverse range of household structures and experiences.

Study Design and Timeline

The fieldwork followed a longitudinal design with three rounds of data collection, aiming to revisit a purposively selected sub-sample of participating households whenever possible. Fieldwork was carried out by three female postdoctoral researchers across both states. At any given time, at least two researchers were present in the field within the same household, and on several occasions all three conducted fieldwork together. We avoided lone working not only to ensure the team's safety and security, but also so field team members could support one another during interviews and engage in mutual learning of interview techniques.

Data collection began with a pilot study of $n=7$ households in Uttar Pradesh and proceeded to the first full round of interviews between December 2022 and March 2023, covering $n=80$ households. While there was some slight restructuring of the interview guides, the variation between the pilot and main interview data was small, particularly because interviews were

semi-structured and flexible around participants' comfort, and so uniformity of interview structure was never our aim. Moreover, the pilot data yielded important insights about families working in particular conditions (brick kilns) which were underrepresented in our main data. Given these considerations, we ultimately included the pilot data within the main data.

The second round took place from August to November 2024, and the third from March to May 2025, each involving 40 households, drawn largely as subsets of the original sample. A small number ($n=03$) of second-round households were not part of the first-round sample due to feasibility constraints, but these were retained and followed again in the third round. While most participants remained consistent across rounds, there were occasions when household members who had not previously participated were interviewed in place of members who were unavailable due to work, time, or health constraints. In a few cases, although participants from earlier rounds were unable to take part in subsequent visits for these same reasons, other members of their households continued to participate in the study. At least four household members including adults and children (aged seven and above), were interviewed in each round wherever possible.

Participant groups

Sampling aimed to maximise diversity across caste, religion, and household (single family vs. joint family) and family structure (nuclear, single-parent, multi-generational). In Uttar Pradesh, most participants were engaged in farming, informal sector work such as painting, construction, daily wage labour, or service roles including driving. Women in rural areas typically contributed to agricultural work, while women in urban areas were largely homemakers, with a small number involved in beauty parlour services, tailoring, or self-help group activities. In Goa, male participants predominantly worked in informal occupations such as tailoring, driving, and security services. Many women in participating households were employed as cooks, domestic workers, or gardeners. Children, between the ages of 7 and 17, were enrolled in school and often supported their parents with household or livelihood-related tasks.

Data Collection Instruments

Data for the study were collected using household rosters, interview guides, focus group discussions (FGD), kitchen scale and observational notes. The household roster gathered key information on household identification details, dwelling characteristics, water and cooking fuel sources, land ownership, ration card status, income, and the main earner. The adult respondent listed all household members, noting age, gender, relationship, education, occupation, duration of stay, and school enrolment, along with details of anyone who had moved in or out. In Round 1, this roster, modelled after the Demographic and Health Survey (DHS) rosters for recording demographic and household details was completed manually, while in Rounds 2 and 3 the process was digitised using Qualtrics on a password protected, encrypted iPad. A set of fixed questions (FIES scale) from the interview instrument was also digitised to improve clarity and consistency.

Three semi-structured interview instruments, created for participants aged 7–12, 13–17, and 18 and above, and were first trialled during the pilot phase. These guides were initially designed by the PI, who received inputs from the Co-I, a board of project stakeholders, and the field

team. While the focus of many questions overlapped across tools, the instruments for children used simpler wording and incorporated more practice-based methods, such as drawing activities and vignette-based storytelling. Shared items across child and adults included daily food consumption patterns, access to food, experiences of hunger, understanding of nutritious and preferred foods, and seasonal variations in availability. Both groups were asked about responsibilities within the household, sources of support during periods of scarcity, intra-household food distribution, and included a 24-hour recall of meals. Questions which were unique to adult interviews included labour histories, income fluctuations, migration, agricultural production, and financial decision-making, as well as detailed information on water access, housing and sanitation infrastructure, use of cooking fuel, expenses on children's education and engagement with government schemes. Child-specific interviews contained questions about their school experiences, including attendance, meal provision, experiences with intra-household distribution from their perspective, including moments when they felt they received more or less food than others. A child-adapted version of the FIES was included to capture their experiences of worry, hunger, or skipping meals. Additionally, children shared their perceptions of how their household's situation compared to others in the community. Insights from the pilot informed revisions for Round 1, and further adjustments were made for Rounds 2 and 3 following field experiences. These instruments provided a broad structure for interaction yet left space for open-ended exploration as directed by participants' narratives. Ethical approval was obtained for all amendments, which were necessary as unanticipated challenges emerged during fieldwork.

By Rounds 2 and 3, only two interview instruments were used. Unlike the first round, which did not include FGDs, rounds 2 and 3 incorporated FGDs to bring in more interaction and varied perspectives. In Round 2, 3 FGDs were conducted with children and women in Goa, and with farmers in Uttar Pradesh. In Round 3, the three FGDs included a group of children, a group of women, and a group of older women to capture generational insights in Goa. During Round 2, a kitchen weighing scale was introduced to capture detailed food-intake information. The household member responsible for cooking and rationing (usually an adult woman, often the mother) was asked to weigh or estimate the quantities of food prepared that day or the previous day, to better understand nutritional intake and its distribution within the household.

Across all three rounds, observational data remained an essential component of the fieldwork, with details noted on phones or in field diaries. We kept a keen eye on contextual observations that could complement interview data, such as how family members communicated or if we sensed any tension. We paid close attention to broader environmental and infrastructural features, including agricultural practices, water and sanitation conditions, proximity and type of grocery stores, and availability of local markets. With participants' permission, photographs were occasionally taken to record aspects of housing structure or kitchen arrangements. However, no images containing people or identifiable locations were used to ensure confidentiality.

Fieldwork Procedures

Once a household was identified for inclusion, the adult members were given a detailed information sheet that included the contact details of the PI and Co-I, and their respective

institutional details should they have any questions. The field team reviewed the content of the written information sheet aloud, checking for understanding and creating space for questions. After receiving oral consent for both the interview itself and for audio recording, the team completed a household roster with an adult member of the household providing details for themselves and other household members.

After the roster was completed, individual interview appointments were scheduled. Children provided assent before participating, in addition to consent from their parents. In addition to audio-recording interviews, with explicit permission from participants, researchers kept field notes throughout. Participants were informed about how their data would be used and were given a timeframe during which they could contact the team if they wished to withdraw, amend information, or raise concerns. While procedures were unfamiliar to households in the first round, families were already acquainted with the process in subsequent rounds. In Rounds 2 and 3, a WhatsApp number was also provided so participants could reach the team more easily, alongside the contact information already shared. A short YouTube video introducing the project and our YouTube channel in Hindi was included in the participant information sheet to give households a clearer understanding of the project and as a touchpoint for them to keep up with updates on the project after the team had left the field. The video explains updates on the project will be provided through the YouTube channel.

All interviews were conducted in Hindi, were face-to-face, and were primarily in participants' homes or shared neighbourhood spaces, mostly determined by participant comfort and logistical constraints. In a small number of cases where families were conducting daily wage or agricultural labour, the team conducted interviews at work sites. This was determined by participants themselves. The field team travelled together to whatever site was preferred by participants, generally visiting each family several times to speak with multiple members of the household at the participants' convenience. Given the spatial constraints of many households (often characterised by limited privacy and the presence of multiple members), interviews were scheduled at different times, sometimes spread across a week to ensure depth and continuity in conversations. In some cases, after taking participants' informed consent, interviews were conducted in relatively private settings such as temple premises, open courtyards or roof top terraces.

As a gesture of appreciation, each participating household received a small basket of staple food items, sweets, and school supplies such as pencils. These baskets were distributed in each wave; households participating in all three waves received 3 baskets in total. These were distributed after the interviews so as to minimise the risk of the baskets becoming a coercive motivation to participate. However, in the second and third rounds, it was unavoidable that households were aware of the practice.

Regular debriefing sessions (nightly initially until field practices were well-established, then as needed thereafter) were held with the PI via calls, supplemented by regular WhatsApp chats, providing a space to discuss fieldwork challenges, plan next steps, and reflect on experiences.

Transcription and Data processing

Data were initially transcribed by the field team. Interviews, conducted in Hindi and its regional dialects, were transcribed and then translated into English. Later, a transcriptionist with a social sciences background was hired to carry out transcription and translation, maintaining regular communication with the field team to ensure that nuances in dialects, gestures, and pauses were accurately captured. During transcription, all participant names, as well as names of schools or any other identifiable locations, were anonymised. After transferring the recordings to the project OneDrive, all audio files were deleted. The data are securely stored with the PI in locked facilities.

Ethical Procedures

Ethical considerations were central to our research design and practice, especially as we worked with participants situated in highly vulnerable circumstances. We treated ethics as an ongoing and iterative process rather than a one-time procedural step, ensuring that respect, sensitivity, and care guided all stages of fieldwork. Special attention was given to interviews with children across different age groups, where we recognized the need to go beyond formal parental consent and children's assent. We actively attended to children's ongoing feelings during interactions, pausing or redirecting conversations whenever discomfort was sensed, and worked to build trust and rapport that allowed them to express themselves freely. Similarly, we were mindful of the demanding schedules and time constraints of many participants, such as women balancing domestic and wage responsibilities. Their availability and convenience determined when and how interviews were conducted, with flexibility and respect for their priorities shaping our engagement. We were committed to prioritize participants' well-being and recognize the unequal power dynamics of research while also taking care of our safety and well-being.

Participant Characteristics

Web Table 1 provides a frequency distribution for key sociodemographic variables for participants in our study. The participant sample consisted primarily of individuals from Uttar Pradesh, who made up around two-thirds of respondents across all three rounds, while participants from Goa represented the remaining one-third, reflecting the larger size and greater diversity of the state compared to Goa. Participants from Uttar Pradesh comprised 69% in R1, 62.5% in R2, and 62.5% in R3, while those from Goa made up 31%, 37.5%, and 37.5%, respectively. Most participants resided in urban areas, accounting for 62% in R1, 70% in R2, and 65% in R3, with rural respondents representing 38%, 30%, and 35%. The majority identified as Hindu (78% in R1, 77.5% in R2, 77.5% in R3), followed by Muslims (19%, 17.5%, 20%), Christians (2%, 2.5%, 2.5%), and a small proportion identifying as other religions (1%, 2.5%, 0%). Caste distribution included General category participants at 23% in R1, 27% in R2, and 22.5% in R3; Other Backward Classes at 29%, 22.5%, and 15%; Scheduled Caste participants at 27%, 17.5%, and 30%; One Scheduled Tribe family making 1%, 2.5% and 2.5% of the total in R1, R2 and R3 respectively; Undeclared caste at 10%, 5%, and 12.5%; and insufficient data reported for 10%, 25%, and 17.5%, respectively. Most households were single households, comprising 84% in R1, 85% in R2, and 85% in R3, while joint households represented 16%, 15%, and 15%. Family structure was primarily nuclear, with 59% in R1, 67.5% in R2, and 60% in R3, followed by multi-generational families at 33%, 20%, and 30%.

Single-parent families accounted for 6%, 7.5%, and 10%, while other family types made up 2%, 5%, and 0% across the three rounds.

Web Table 1. Household characteristics, primary semi-structured interview data, primary data, Round 1 (n=86 households) and Rounds 2 and 3 (n=40 households).

Variable Name	Round 1		Round 2		Round 3	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
<i>State</i>						
UP	59	69%	25	62.5%	25	62.5%
Goa	27	31%	15	37.5%	15	37.5%
<i>Location</i>						
Rural	33	38%	12	30%	14	35%
Urban	53	62%	28	70%	26	65%
<i>Religion</i>						
Hindu	67	78%	31	77.5%	31	77.5%
Muslim	16	19%	7	17.5%	8	20%
Christian	2	2%	1	2.5%	1	2.5%
Other	1	1%	1	2.5%	0	0%
<i>Caste</i>						
General	20	23%	11	27%	9	22.5%
Other Backward Classes	24	29%	9	22.5%	6	15%
Scheduled Caste (SC)	23	27%	7	17.5%	12	30%
Scheduled Tribe (ST)	1	1%	1	2.5%	1	2.5%
Undeclared	9	10%	2	5%	5	12.5%
Not enough data	9	10%	10	25%	7	17.5%
<i>Household Type</i>						
Single household	72	84%	34	85%	34	85%
Joint household	14	16%	6	15%	6	15%
<i>Family Type</i>						
Single parent	5	6%	3	7.5%	4	10%
Nuclear Family	51	59%	27	67.5%	24	60%
Multi-generational	28	33%	8	20%	12	30%
Other	2	2%	2	5%	0	0%