

Emergency Food Security Assessments (EFSAs) Technical guidance sheet n°. 8

Introduction to qualitative data and methods for collection and analysis in food security assessments¹

Table of Content

1. What are qualitative data?	2
2. What is the difference between qualitative and quantitative data?	3
3. What are the main advantages and disadvantages of qualitative methods?	4
4. What approaches lead to qualitative data?	4
5. How are qualitative approaches and qualitative data used in food security assessments?	5
6. What types of qualitative data provide information on food availability, access and utilization and on the causes of malnutrition?	6
7. What skills are needed to collect and analyse qualitative data?	9

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Introduction to qualitative data and methods for collection and analysis in food security assessments

This Technical Guidance Sheet (TGS) is intended to assist staff with little or no experience of collecting and analysing qualitative data for food security assessments. It does not provide guidance on food security analysis itself, but rather on how to use qualitative data for such analysis. TGS No. 9 provides more practical guidance.²

1. What are qualitative data?

Qualitative data comprise virtually any information that is not numerical in nature and is difficult or even impossible to quantify. Qualitative data are often *textual* observations that portray attitudes, perceptions or intentions. They are typically expressed as words, rather than numbers, and are used to describe and provide meaning and context to a situation – the story behind the statistics. More important than their expression as words rather than numbers, qualitative data have a unique perspective – a view from inside – and answer questions such as how? and why? rather than what? or how many?

Qualitative data can be obtained from **quantitative methods**, and **quantitative data** can be obtained from **qualitative methods**. The distinction between the two is often blurred because:

- all qualitative data can be coded quantitatively, when assigned an arbitrary number or code;
- the interpretation of all quantitative data is based on qualitative judgement, understanding and establishing thresholds.

The main differences between the qualitative and quantitative approaches lie in their underlying objectives and perspectives. See Table 1 in Section 4.

This TGS uses the following definitions:

- *Data* are the products of a data collection effort.
- *Approaches* describe the main types of data collection and analysis, based on the assessment objective. *Approaches can be qualitative or quantitative approaches. Most rapid and participatory approaches are qualitative.*
- *Methods* refer to how the data are collected, such as through *observations, discussions, interviews or household surveys*, or analysed, such as *memoing or coding*.
- *Tools* are the instruments that assist data collection or analysis, such as *questionnaires and recording devices*.

² See Technical Guidance Sheet No. 9 *Qualitative Data Collection and Analysis for Food Security Assessments*, L. Morinière, WFP Emergency Needs Assessment Service (now Food Security Analysis Service), September 2007.

2. What is the difference between qualitative and quantitative data?

- **Quantitative data** are expressed in numbers, frequencies, rates or proportions; for example the number of meals eaten daily, the number of respondents who answered a particular question in a particular way, rates of malnutrition, proportions of income lost.
- **Qualitative data** tend to reflect perceptions, opinions, intentions and observations.

Qualitative data are more likely to put a problem into context, or provide insight into how the problem affects a community. They provide meaning to the quantitative outputs of a survey, and *vice versa*, so both qualitative and quantitative data should be present in all food security assessments.

It is generally accepted that qualitative data are more easily obtained from rapid appraisals than quantitative data are, but rapid appraisals can generate both types of data. During a rapid appraisal, quantitative data are not usually measured or objective; for example, an investigator may ask a village key informant how many sacks of cereal an average household has harvested, but she/he cannot count the sacks. This is true for most food security data collected via sample surveys; for example, the number of shocks to which a community or household is exposed is reported but not counted.

Distinguishing quantitative from qualitative data is often challenging. One way of doing so is to review the objective driving the method or question that produced the data, as illustrated in the examples in Box 1.

Box 1. Examples of quantitative and qualitative data

Example 1

- A mother is asked how many days her household has eaten meat in the past week and she answers "2". This is a numerical answer, thus quantitative data. Because the question does not attempt to capture attitudes, perceptions or intentions, and the answer is expressed directly as a number, it is not considered qualitative data.
- However, what an enumerator hears and observes while asking this question during a household interview – which is usually a quantitative method – may be rich in qualitative elements, such as size, food storage, cooking items in and around the house, and husband-wife dynamics. If noted, these become qualitative data. Enumerators should be encouraged to record this kind of information to enrich the data collected and inform its interpretation.

Example 2

- In a focus group discussion – which is a classic qualitative method (see Section 6) – five men are guided to pile stones in answer to the question "Where do you get your food?". The question is open-ended, which is a sign of qualitative methods. The method is participative, so follows the qualitative approach.
- The answers that result, however, can easily be quantified – for example, 50 percent from production, 25 percent from the market – and do not produce information on attitudes, perceptions and intentions. What is heard and observed during the focus group discussion can produce qualitative data, but the answer to the question itself is not qualitative.

The major distinction between the two is that qualitative approaches do not seek statistical significance and thus, cannot be extrapolated without relying on judgement. Any extrapolation of qualitative data to larger areas will inevitably be general and not statistically rigorous. Qualitative approaches make up for lack of statistical rigour by providing explanations and understanding. Qualitative approaches are sometimes considered to be less rigorous than quantitative ones, while quantitative approaches are sometimes criticized for their inflexibility, mechanical responses and results with no explanation. Both approaches are necessary in food security assessments, to complement, verify and triangulate the information.

3. What are the main advantages and disadvantages of qualitative methods?

Qualitative methods include:

- observations, for example, of how populations interact with food at home, at the market, in the field;
- semi-structured/unstructured interviews with key informants;
- focus group discussions.

The **main advantages** of qualitative methods are that they allow:

- greater understanding of cultural differences;
- engagement and participation of communities;
- improved interactions with beneficiary populations, and cross-cultural communication between beneficiaries and outsiders;
- rapid collection of information regarding a disaster situation;
- exploration of the reasons behind and/or causes of identified phenomena;
- incorporation of the perceptions of affected communities.

The **main disadvantages** of qualitative methods include:

- a need for skilled interviewers and facilitators who can guide discussions and analyse qualitative data for decision-making purposes, such as on the need for and type of assistance;
- data that cannot be extrapolated rigorously to larger populations; generalization of qualitative findings across large population groups – farmers, nomads, etc. – should be addressed cautiously;
- subjective results, which are difficult to verify without triangulation with other sources;
- the time and cost required to develop suitable methods, adapt them to each context and analyse the data.³

It is important to employ both quantitative and qualitative methods, as they complement each other's strengths and weaknesses:

- Qualitative methods can be used to explore issues *prior to* an in-depth assessment, helping to identify which closed and focused questions should be asked as part of a quantitative study or a new monitoring system; the qualitative data obtained can also provide contextual explanations for quantitative findings.
- Qualitative methods can also be used *after* a quantitative study, to clarify and/or explore a particular theme.

4. What approaches lead to qualitative data?

As noted, qualitative data can be obtained from either qualitative or quantitative approaches. Table 1 illustrates the main characteristics of each.

³ See Technical Guidance Sheet No. 9 *Qualitative Data Collection and Analysis for Food Security Assessments*, L. Morinière, WFP Emergency Needs Assessment Service (now Food Security Analysis Service), September 2007.

Table 1. Qualitative and quantitative approaches

	QUALITATIVE APPROACH	QUANTITATIVE APPROACH
Objective	To explore, understand phenomena	To quantify, confirm hypotheses
Data format	Mainly textual, but also numerical and categorical	Mainly numerical and categorical, but sometimes textual (observations)
Answers the questions	How? Why? (open-ended)	What? How many? (generally closed)
Perspective	<ul style="list-style-type: none"> Looks at the whole context from the inside Can lend itself to community participation if time allows 	Looks at specific aspects from the outside
Study design and instruments	Flexible, the assessor is also an instrument	Fixed, standards control assessor's bias

Qualitative approaches aim to explore and understand, while quantitative ones strive to confirm hypotheses. Qualitative approaches are based on flexible observation and discussion; quantitative approaches are usually based on fixed formal surveys.

Qualitative approaches include participatory and rapid appraisals. Participatory appraisal is designed to empower communities in their own development; rapid appraisal is often called participatory, even when it does not include true participation. Both types of appraisal can be used in rapid or in-depth assessments:

- Participatory approaches aim to gain deeper understanding of a situation, and often to increase the knowledge, skills and capacities of focus groups, community members or other beneficiaries.
- Rapid appraisals are similar, but less participatory; they offer quick, low-cost ways of generating qualitative data, such as through direct observation or transect walks.

Many assessments that claim to use participatory approaches do not truly engage the community. Participatory methods help communities to take ownership of proposed interventions, but they are difficult and rarely appropriate in rapid food security assessments.

5. How are qualitative approaches and qualitative data used in food security assessments?

Qualitative data are not just an explanatory add-on to quantitative data collection. In rapid-onset emergencies, and when time and/or access are limited, qualitative approaches frequently form the core of the assessment. When applied properly, they can produce high-quality information that feeds the whole programme planning process.

In a food security assessment, qualitative approaches and data increase understanding of food and livelihood security by identifying who is and who is not food-secure, and why. Incorporating the perceptions of livelihoods and food security held by both food-secure and food-insecure

people will greatly enrich the analysis. In general, an assessment can use qualitative approaches when:

- the causes of food insecurity are unknown, and hypotheses have to be generated, rather than confirmed, such as in a new crisis situation that is still poorly understood;
- a broader understanding of the *nature* of a particular food security issue is required; for example, quantitative data do not explain the causes of malnutrition reported in a previous anthropometric survey or in secondary data;
- information is needed about *attitudes* linked to food and livelihood security choices, or *priorities*, *perceptions* and *intentions* regarding food security; for example, why people behave in a certain way to maintain their food security;
- *the situation is volatile*, such as when there is conflict and continuous displacement, which make quantitative data rapidly outdated or unfeasible to collect;
- *time and funding* are insufficient for a comprehensive food security assessment; it is generally accepted that qualitative data are more easily obtained during initial and rapid assessments than purely quantitative data; *comprehensive* is not synonymous with *quantitative*, however, and all food security assessments should combine qualitative and quantitative approaches to the extent possible.

6. What types of qualitative data provide information on food availability, access and utilization and on the causes of malnutrition?

Qualitative data can be collected on all aspects of food and nutrition security (see the Food and Nutrition Security Conceptual Framework in the Annex). Table 2 shows the variety of qualitative data that can be obtained using different qualitative methods – observation, discussions, semi-structured interviews – to inform each element of the conceptual framework. *These are only illustrative examples and are not exhaustive.*

It is generally understood that structured questionnaires seek quantitative data. They are not discussed in detail here *except when qualitative observations accompany them.*

Table 2. Examples of qualitative data collected from observations, discussions and interviews, following the Food and Nutrition Security Conceptual Framework (see Annex)

	METHODS		
	Observation <i>Visual records, which become qualitative data when noted</i>	Discussion <ul style="list-style-type: none"> • <i>Community discussion (CD)</i> • <i>Focus group discussion (FGD)</i> 	Interview <ul style="list-style-type: none"> • <i>Key informant semi-structured interview (KII)</i> • <i>Household structured interview (HHSI)</i>
FOOD AND NUTRITION SECURITY OUTCOMES (examples)			
Nutrition status	Observe children for physical signs of kwashiorkor or severe emaciation ⁴	CD: list major health problems FGD with mothers to gain insight into major causes	KII with local nurse on traditional treatment of malnutrition
Mortality	In communities , observe fresh graves and local funeral rites, to explore the financial, food-related, etc. burden on livelihood security	CD: list most common causes of death in the village FGD with families with recent death of a productive member, to explore strategies for minimizing the economic burden	KII with local doctor on major causes
IMMEDIATE CAUSES OF FOOD INSECURITY AND MALNUTRITION (examples)			
Food utilization	Observe available utensils, and families' food handling and meal preparation techniques Observe social dynamics regarding food ownership/storage between husbands and wives and among castes/ethnic groups	CD: open-ended brainstorming on coping strategies FGD: historical and seasonal calendars (useful to track birth dates if an anthropometric survey accompanies the assessment)	KII with local teacher to identify education's role in local food insecurity HHSI: assess relative importance of common food items for various wealth or food security groups, using open-ended questions (answers may be pre-coded)
Health practices	Observe handicapped and elderly – vulnerable groups	CD: pile sorting of major health problems FGD with HIV victims on major concerns and priorities	KII with clinic staff to gather impressions and concerns about service quality
Care practices	At local clinics observe equipment, infrastructure, regularity of clientele, interactions between and among clinic staff and population	CD to gain general impressions of village's main social concerns FGD: pile sorting with mothers to gather perceptions about the importance of care/water versus food	KII with female elders to gather perceptions about cost/quality of health care and water/sanitation HHSI with female-headed households to explain care challenges, using open-ended questions (answers may be pre-coded)

⁴ Inference of the nutrition status from observations of individuals' physical appearance requires experience and should be done only by staff with a health or nutrition background. Caution is required when drawing conclusions from such observations.

	METHODS		
	Observation <i>Visual records, which become qualitative data when noted</i>	Discussion <ul style="list-style-type: none"> Community discussion (CD) Focus group discussion (FGD) 	Interview <ul style="list-style-type: none"> Key informant semi-structured interview (KII) Household structured interview (HHSI)
Individual dietary intake	Observe childhood weaning practices (rarely feasible during rapid assessments)	FGD with mothers in poorest households, to explore child feeding practices	KII with local clinic staff to identify trends in child feeding practices
UNDERLYING CAUSES OF FOOD INSECURITY AND MALNUTRITION (examples)			
Household-level food consumption	Look for stoves, cooking utensils and cooking fuel	CD: pile sorting of major sources of food consumed – production, market, etc. – and expenditures	KII with teacher to learn about what schoolchildren are typically given for breakfast
Food access	Observe food stocks and handling in nearby markets, or trucks and other transport means Observe road quality when travelling	CD on prospects for household employment and income-generating activities, food/cash receipts FGD with one representative of each group (gender, age, livelihood) to categorized households into 3 levels of relative wealth	KII with market traders and sellers, to identify trends, source regions and constraints HHSI with those whose livelihoods are precarious, to describe limits to and sustainability of coping strategies, using open-ended questions (answers may be pre-coded)
Household livelihood assets and strategies	Observe gender practices in different livelihood groups During a household survey , observe signs of diverse strategies	CD: brainstorming on livelihood groups in the village FGD with each livelihood group, pile sorting of the importance of income-generating activities	KII with fisher on recent trends
BASIC CAUSES OF FOOD INSECURITY AND MALNUTRITION			
Food availability	During a transect walk, observe farmers' cultivated fields at sowing or harvesting During a household survey , observe household food stocks	CD: open-ended brainstorming on foods grown by major livelihood groups FGD with fishers to identify evolution of local catch and its contribution to their food security	KII: transect walk with village chief/administration officials HHSI with poorest households to understand land tenure problems, using open-ended questions (answers may be pre-coded)

	METHODS		
	Observation <i>Visual records, which become qualitative data when noted</i>	Discussion <ul style="list-style-type: none"> Community discussion (CD) Focus group discussion (FGD) 	Interview <ul style="list-style-type: none"> Key informant semi-structured interview (KII) Household structured interview (HHSI)
Policies, institutions and processes	Observe who is living where, to ascertain whether specific groups within a community are marginalized	CD: open-ended listing of institutions, NGOs active in the neighbourhood FGD: Venn diagram of all village-level actors in food security	KII: flexible interview with local authorities to gather perceptions about impact of agricultural policy HHSI: weight awareness of and importance given to various market institutions
Hazards and shocks	Observe the effects and impact of hazards – changed water levels, destroyed houses, etc. – or preparations for an imminent hazard, such as use of alarm systems or cyclone shelters During a household survey , note emotional strain while collecting information on violent conflict	CD: open-ended inventory checklist of all hazards occurring in past 5 years FGD with survivors of earthquake to understand priority needs	KII with local disaster manager to learn about response efforts to date

For food security assessments that aim to identify the needs of the most vulnerable, qualitative methods can help to group village households according to wealth level, such as poor, less poor and non-poor, or degree of food self-sufficiency, such as stocks for 12 months, six months or three months. This process, is often called wealth ranking;⁵ focus groups are made up of people from a single wealth or other group, and in-depth household surveys should start with the households considered to be most vulnerable. Wealth ranking helps to ensure that time is spent on those most likely to need assistance – the poorest group – and that local perceptions are utilized.

Time allowing, focus group discussions or interviews with more than one population group – asking the same or similar questions to each – enable comparisons among groups, thereby testing the validity of perceptions.

7. What skills are needed to collect and analyse qualitative data?

A **facilitator** has an all-important role in both collection and analysis:

- in collection, to extract accurate information from respondents;
- in analysis, to guide teams through triangulation sessions.

Other important human resources required for qualitative data collection and analysis include good trainers and excellent translators/interpreters.

For qualitative data collection, the most useful skills are observation, listening and asking questions in ways that elicit honest response. These skills may require intensive training; strong

⁵ There are several unresolved issues related to wealth ranking: although it is relatively easy to identify the richest and poorest extremes, it is often difficult to identify the middle class(es).

expertise is needed to design tools and record insights that can be retrieved and used by other people – especially those who were not present during the data collection in the field.

Examples of skills required for adequate observation

- In an area where the harvest provides livestock fodder, staff need to be trained to look at fodder stocks and observe the differences in colour, which distinguish fodder from previous harvests from more recently harvested fodder. This gives an idea of how harvests have been – information that would have been missed if the assessor had merely reported seeing fodder stocks.
- Livestock condition also provides additional information, but a bony cow is not necessarily in poor condition; assessors should instead look at its rump and the hollows on its back.

Thinness in humans does not necessarily mean that they are malnourished.

Sensitive topics such as physical abuse in conflict zones require other special skills to circumvent cultural barriers and obtain useful information. General communication skills and high cultural sensitivity are key. Gender issues are important when sensitive topics are being discussed, and the assessment team must have appropriate numbers of male and female members.

Qualitative data analysis is challenging. Because there are very few set rules, such as those in statistics, qualitative data collection, interpretation and analysis are based on experience. Careful design and adherence to tools and adequate communication are the first steps to ensuring insightful data collection and qualitative analysis. Technical Guidance Sheet No. 9 provides additional advice on the design, collection and analysis of qualitative data.

References

Center for Refugee and Disaster Studies. 2000. *Training in Qualitative Research Methods for PVOs and NGOs (& Counterparts)*. Baltimore, John Hopkins University School of Public Health.

Emerson, R.M. 2001. *Contemporary Field Research: Perspectives and Formulations*, Prospect Heights, USA, Waveland Press.

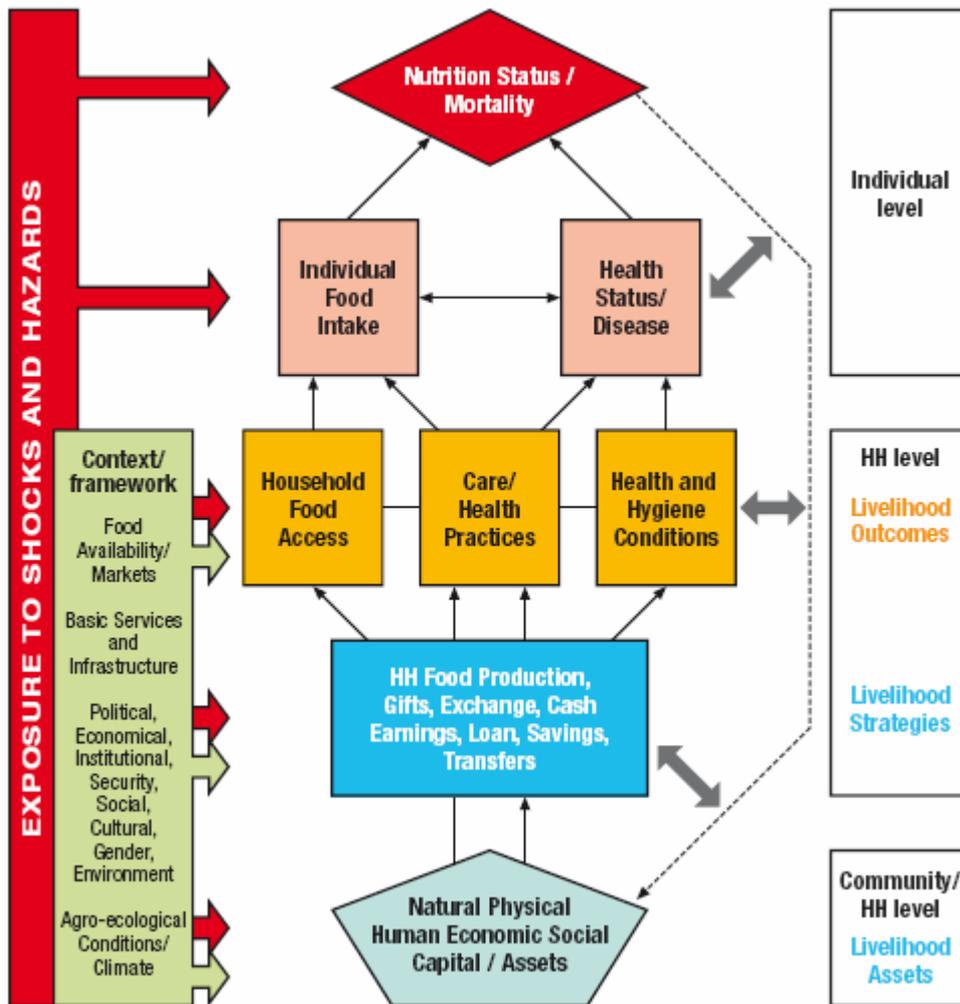
Kennedy, E. 2003. Keynote Paper: qualitative measures of food insecurity and hunger. *FAO Conference on Measurement and Assessment of Food Deprivation and Undernutrition Proceedings of the International Scientific Symposium*, Rome, FAO.

Shensel, S.L., Shensel, J. and Lecompte, M. 1999. *Essential Ethnographic Methods: Observations, Interviews and Questionnaires. Ethnographers Toolkit*. Altamira Press.

WFP. *How to Consolidate, Process and Analyze Qualitative and Quantitative Data*. Rome, WFP Office of Monitoring and Evaluation.

Annex

Emergency Food Security Assessment Conceptual Framework



These Technical Guidance Sheets, the EFSA Handbook and other related resources are available at

www.wfp.org/food-security