KAP manual

# Guidelines for assessing nutrition-related Knowledge, Attitudes and Practices

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# Guidelines for assessing nutrition-related Knowledge, Attitudes and Practices



by **Yvette Fautsch Macías** R.D., M.Sc.
FAO Nutrition Consultant

with **Peter Glasauer** Ph.D.
FAO Nutrition Division

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**For comments, questions, and additional information, please contact:**

The Director
Nutrition Division
Food and Agriculture Organization of the United Nations (FAO)
Viale delle Terme di Caracalla, 00153 Rome, Italy
E-mail: ESN-Director@fao.org
Fax: + 39 0657054593

**To obtain the electronic version of the manual and the KAP model questionnaires in MS Word format please go to:**
www.fao.org/docrep/019/i3545e/i3545e00.htm

Cover photo: Interviewing a caregiver in Otdar Meanchey, Cambodia. ©FAO/Yvette Fautsch Macías

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# Acronyms

| | |
|---|---|
| DDS | Dietary diversity score |
| FBDG | Food-based dietary guidelines |
| FFQ | Food frequency questionnaire |
| KAP | Knowledge, attitudes and practices |
| UNICEF | United Nations Children's Fund |
| WHO | World Health Organization |

# 1 Introduction

## 1.1 Background

Programmes and interventions in various sectors are increasingly aimed at improving nutrition. As a result, a growing number of professionals from diverse backgrounds are planning, implementing and evaluating interventions that include a nutrition component.

Implementing efforts to improve nutrition and measuring their impact requires suitable indicators and tools. Indicators of nutritional status are the most common indicators for assessing the impact of interventions with a nutrition focus. Formulating and designing targeted programmes and interventions, however, require more than just measuring nutritional status; they require a thorough understanding of what people actually eat and what personal factors underlie people's dietary habits.

Studies that assess and analyse people's nutrition-related knowledge, attitudes and practices (KAP) are a useful method for gaining such an insight into peoples' personal determinants of their dietary habits. They can thus provide valuable inputs for effective programme and project planning. In addition, KAP studies are indispensable for evaluating nutrition-education and communication interventions, i.e. activities that explicitly address (and aim to improve) people's nutrition-related knowledge, attitudes and practices.

## 1.2 Why was this manual prepared?

Many KAP studies have been conducted by numerous researchers and institutions using a variety of approaches. In consequence, results of nutrition-related KAP surveys usually cannot be compared because of major differences in study design (quantitative, qualitative) and in how knowledge, attitudes and practices are defined and measured. Many reports do not provide detailed information about these crucial elements of the research protocol, and as a result the studies cannot be reproduced (1–7). Reports of KAP studies conducted in community settings by non-governmental organizations and international agencies also display major inconsistencies in the way findings are reported.

Some guidelines for conducting KAP studies already exist (8–10) and provide steps for the preparation and implementation of quantitative surveys. None of them, however, provides model questionnaires for assessing nutrition-related KAP, nor do they offer guidance for using KAP information within a situation analysis or for evaluating outcomes in the context of nutrition projects.

This manual aims at improving this situation by:

- offering guidance for the effective planning, implementation and analysis of nutrition-related KAP surveys at the community level; and
- contributing, through model questionnaires, to the standardization of KAP studies and thus to the comparability of their results.

## 1.3 What does this manual provide?

The manual offers guidance and practical steps for planning and conducting a KAP survey, and for analysing and reporting the survey findings. In order to keep the manual brief and focussed, we did not include detailed information on basic social research techniques such as sampling methods, statistical analyses or outcome evaluation designs. Where such information is particularly relevant to KAP studies, we highlight the issue.

The appendixes provide additional information on key topics, including a large collection of model questionnaires (referred to in this manual as modules) that were developed to facilitate the design of KAP survey questionnaires (Appendix 6, page 78). These modules comprise predefined questions that capture information on critical knowledge, attitudes and practices related to the 13 most common nutrition issues:

- Module 1: Feeding infants younger than 6 months
- Module 2: Feeding young children (6–23 months)
- Module 3: Diet of school-aged children
- Module 4: Nutrition during pregnancy and lactation
- Module 5: Undernutrition
- Module 6: Iron-deficiency anaemia
- Module 7: Vitamin A deficiency
- Module 8: Iodine deficiency
- Module 9: Food safety
- Module 10: Personal hygiene
- Module 11: Water and sanitation
- Module 12: Food-based dietary guidelines
- Module 13: Overweight and obesity

## 1.4 How should you use this manual?

This manual is a practical reference guide for anyone planning to conduct nutrition-related KAP surveys at the community level. The guidance provided will be most useful to project managers or evaluators who want to:

- obtain information on local nutrition issues and gaps in KAP before they formulate nutrition projects and interventions or

- evaluate the outcomes of nutrition interventions in general, and nutrition education in particular.

Such nutrition interventions can have many different objectives, ranging, for instance, from increasing quantity and quality of food produced (food diversity), improving access to food, promoting home gardening, to feeding programmes and – not least, of course – nutrition education. Educational interventions are a common response to issues described and measured with KAP studies, given that KAP surveys by definition investigate people's knowledge and attitudes. This manual uses examples from and refers to nutrition education measures, but this is not to say that KAP surveys are exclusively of relevance in the context of nutrition education interventions.

## 1.5 How was this manual prepared?

The starting point of this manual was a review of KAP survey methodologies and KAP studies in the literature, including survey methodologies from Médecins du Monde (10) and the World Health Organization (9). The authors also analysed a few such studies conducted by FAO and its partners and reviewed an e-learning course, *Assessing impact of development programmes on food security*, prepared by FAO and the Wageningen UR Centre for Development Innovation. This provided an overview of the current state of affairs in KAP studies and allowed the authors to identify current best practices.

FAO's *Family nutrition guide* (11) and the World Health Organization's (WHO) *Five keys to safer food manual* (12) guided the development of the modules and provided answers to knowledge questions. Questions on infant and young child feeding practices were adapted with permission from documents published in 2010 by WHO (13). The form of the questions was informed by the United Nations Children's Fund (UNICEF) Multiple Indicator Cluster Surveys and the Demographic and Health Surveys, whose questions have been tested and are considered reliable and valid. The modules included in this manual were field-tested in Cambodia, Malawi, Mexico and El Salvador to ensure that they are valid, readable, easy to administer and are not too much of a burden for the respondents.

# 2 Concepts and purpose of KAP surveys

## 2.1 Terminology

Information on KAP is captured using questions and is stated in terms of indicators. To understand KAP surveys, you must be familiar with the following terminology.

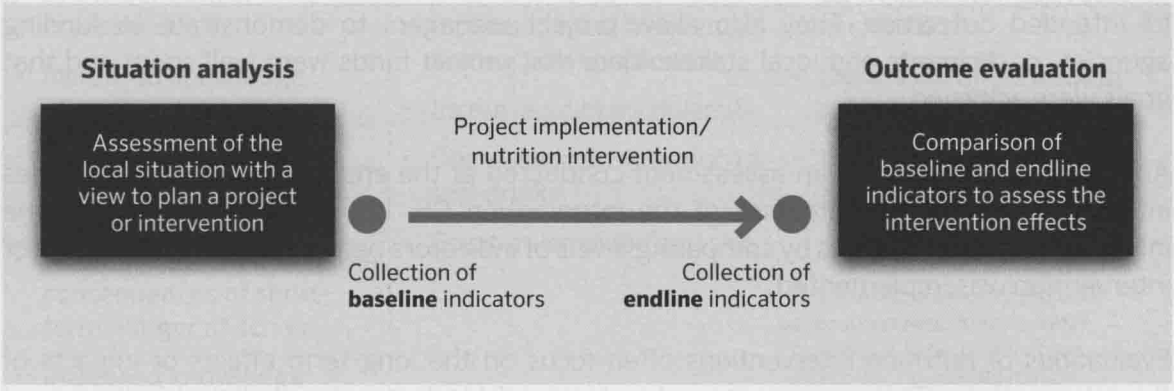
- **Indicator:** Specific aspects of KAP to be measured. In this manual, indicators are mainly stated in terms of numbers, percentages or scores and are used to describe general trends concerning the KAP of a population or to measure changes that occur after an intervention.
- **Question:** Instrument to collect information about an indicator.
- **Outcome:** Specific measurable result of an intervention. This refers to changes in KAP identified by comparing values of indicators from before and after the intervention was introduced.
- **Participant population:** Population that will participate in the intervention.
- **Survey population**: Population that will participate in the KAP surveys. Depending on the circumstances, the survey population can be the entire participant population or a sample of it.
- **Respondent:** An individual from the survey population who responds to the KAP survey questionnaire (also referred to as an informant).
- **Surveyor/interviewer/enumerator:** A trained individual who conducts interviews with respondents of the survey population and fills out the KAP survey questionnaire.
- **Survey manager/supervisor:** An individual responsible of preparing, managing and conducting KAP surveys. He/she forms teams or groups, develops schedules for the teams and provides itineraries for them, including roadmaps, names of villages, phone numbers and other information that might be useful. He/she is also responsible for checking that questionnaires are filled out correctly and annotations are legible, for analysing the collected data and writing the final report.
- **Survey team:** Survey managers and surveyors who work together on the same survey.
- **Planner:** A project planner who analyses the nutrition situation with a view to planning a project or intervention.
- **Evaluator:** A project manager or external evaluator who evaluates the outcomes of nutrition interventions/projects.

## 2.2 Purpose

KAP studies emerged in the 1950s from the need to measure opposition to family planning services (14). Since then, they have been used extensively in family planning and population studies to evaluate and guide existing programmes, and their use has extended to other areas of health, including nutrition.

Nutrition-related KAP studies assess and explore peoples' KAP relating to nutrition, diet, foods and closely related hygiene and health issues. KAP studies have been used for two main purposes: (1) to collect key information during a situation analysis, which can then feed into the design of nutrition interventions and (2) to evaluate nutrition education interventions (Figure 1).

FIGURE 1: **Situation analysis and outcome evaluation**




### Situation analysis for intervention planning

In the context of nutrition-related projects or programmes, a situation analysis describes the type and magnitude of nutrition issues and identifies possible causes of the nutritional problems observed. The findings of a situation analysis will help in planning a nutrition intervention aimed at alleviating the nutrition problems identified.

KAP studies can contribute to a situation analysis by helping determine the existing knowledge, attitudes and practices relating to nutrition, which identifies nutrition education priorities. The steps involved are as follows (1–18):

- **"What we've got":**
  - » Identify local nutrition problems through secondary sources (e.g. national health statistics). *Prioritize the nutrition issues* that are most amenable to educational means.
  - » *Identify people's dietary practices* that are underlying the nutrition problems.
  - » Identify intrapersonal determinants of these practices, such as nutrition-related *knowledge and attitudes*.

- **"What we need":**
  - » *Identify gaps* in people's knowledge, attitudes and dietary practices.
  - » *Identify priority needs* in nutrition education with a view to informing project or intervention design.

***Note**: A situation analysis is different from a baseline survey. A situation analysis has a planning function and is conducted during the project planning phase, whereas a baseline survey is part of monitoring and evaluation of the project or intervention and is conducted at the beginning of the implementation phase.*

## Outcome evaluation

Monitoring and evaluation are an essential part of project or intervention implementation and management, helping ensure that the project or intervention is on track and achieving its intended outcomes. They also allow project managers to demonstrate to funding agencies, participants and local stakeholders that project funds were well spent and that goals were achieved.

An outcome evaluation is an assessment conducted at the end of a project and provides information about the outcomes of the intervention (15, 19). It also demonstrates the intervention's effectiveness by comparing levels of indicators before and after the project or intervention was implemented.

Evaluations of nutrition interventions often focus on the long-term effects or impacts of the interventions. These are expressed in terms of biochemical and clinical indicators of nutritional status (for example, haemoglobin levels) and indicators of growth in children, including wasting (being too thin for one's height), stunting (being too short for one's age) and underweight (being too thin for one's age). These long-term indicators do not detect intermediate outcomes and must therefore be supplemented by indicators of short- and medium-term outcomes. Short-term outcomes are immediate results of an intervention, such as changes in knowledge and prevailing attitudes (15, 20). Medium-term outcomes are apparent only after a more extended period and commonly result in changes in behaviour (i.e. practices).

In contrast to indicators of physiological and health outcomes, these are social, psychological and behavioural outcomes, and are thus particularly relevant to monitoring the impact of nutrition education (19, 21) (Table 1).

***Note**: Assessing nutrition-related knowledge, attitudes and practices offers an opportunity to better understand a given situation by providing insights into the social, psychological and behavioral determinants of nutritional status.*

TABLE 1:

**Examples of short-, medium- and long-term outcomes of nutrition interventions that include an educational component**

| Short-term outcomes | Medium-term outcomes | Long-term outcomes (impact) |
|---|---|---|
| Social, psychological and behavioural outcomes | | Physiological and health outcomes* |
| **Changes in intrapersonal determinants of practices**<br><br>Knowledge and attitudes, among others | **Changes in nutrition-related practices** | **Changes in physiological parameters**<br><br>Nutritional status and biochemical indicators |
| **Knowledge**<br>• Increased understanding of the benefits of breastfeeding<br>• Increased knowledge of reasons for feeding young children with thick porridge rather than watery porridge<br>• Increased awareness of the consequences of short-term hunger at school<br>• Increased knowledge of ways to prevent food poisoning<br><br>**Attitudes**<br>• Increased confidence in being able to prepare and enriched porridge (self-efficacy/confidence)<br>• Increased belief in benefits of dietary diversity (perceived benefits)<br>• Increased preference for targeted foods (food preference)<br>• Greater readiness to wash one's hands before eating (readiness to change) | • Increased intake of iron-rich foods among pregnant women<br>• Increased meal frequency among young children<br>• Increased dietary diversity<br>• Decreased consumption of soft drinks<br>• Greater use of iodized salt | • Increased haemoglobin levels among women<br>• Decreased stunting rates in children<br>• Decreased underweight rates among infants<br>• Increased weight gain among pregnant women<br><br>(*Note*: In food security projects or programmes, impacts refer to changes in household food insecurity, household hunger, household expenditure, wealth index and similar measures) |

* The long-term outcomes (i.e. impact or physiological and health outcomes) should only be evaluated several months or even years after the completion of the programme because long-term effects take time to manifest.

***Note**: The boundary between short- and medium-term outcomes is less distinct than that between medium-term and long-term outcomes. For example, some aspects of the dietary behaviour can change immediately after a nutrition education intervention.*

## 2.3 Key indicators: knowledge, attitudes and practices

### Knowledge

#### *Definition of knowledge*

Knowledge is the understanding of any given topic (8). In this manual, it refers to an individual's understanding of nutrition, including the intellectual ability to remember and recall food- and nutrition-related terminology, specific pieces of information and facts.

#### *Measurement of knowledge*

#### *Partially categorized questions*

Partially categorized questions are open-ended questions that require respondents to provide short answers in their own words, accompanied by a list of correct answers plus the options "Other" and "Don't know." Predefined options make analysis easier by listing expected responses. After the surveyor has asked the question, he/she should write down the response provided and then categorize it according to the predefined response options.

***Note**: The respondent may not give the response exactly as it is written in the questionnaire. It is up to the surveyor to understand the **meaning** of the responses given and tick the closest answer in the list.*

Knowledge questions can have a single answer or several answers.

*Example of question with a single answer*

At what age should babies start eating foods in addition to breastmilk?

_____

_____

- ☐ *At six months*
- ☐ *Other*
- ☐ *Don't know*

**Preliminary analysis**

- ☐ Knows
- ☐ Does not know

*Example of question with several possible answers*

There are key moments when you need to wash your hands to prevent germs from reaching food.

What are these key moments?

_____

_____

- ☐ *After going to the toilet/latrine*
- ☐ *After cleaning a baby's bottom/changing a baby's nappy*
- ☐ *Before preparing/handling food*
- ☐ *Before feeding a child/eating*
- ☐ *After handling raw food*
- ☐ *After handling garbage*
- ☐ *Other*
- ☐ *Don't know*

**Preliminary analysis**

☐ Knows

☐ Does not know

Number of correct responses ____

*Preliminary analysis*

A box is provided to allow the surveyor to make a preliminary analysis of the responses to knowledge questions. If the question has a single correct answer, the options are "Knows" or "Does not know." If the question has several correct answers, the options are "Knows" (if the respondent gives one, some or all possible correct answers), "Does not know" (if the respondent gives no correct answers) and "Number of correct responses" (to indicate the number of correct answers provided).

The surveyor can make the preliminary analysis during the interview if he/she has the requisite analytical skills. If, however, the surveyor is unable to perform this analysis, the supervisor should do it based on the surveyor's notes, cross-checking with the surveyor if necessary.

### *Other types of questions*

Knowledge can also be measured through multiple choice questions and true/false questions. We do not recommend these types of questions because the responses can be the result of guessing and therefore give a false impression of knowledge.

### *Indicators used to quantify knowledge*

Indicators of knowledge can be reported in terms of numbers, percentages or scores.

#### *Number*

Examples of numerical indicators include:

- number of respondents who know the correct answer to a question;
- number of respondents who do not know the correct answer to a question;
- number of respondents who know all of the correct answers to a question; and
- number of respondents who know three correct answers to a question, two correct answers and so on.

#### *Percentage*

Percentages used as indicators of knowledge are determined from the numerical indicators. For example:

- percentage of respondents who know the correct answer to a question;
- percentage of respondents who do not know the correct answer to a question;
- percentage of respondents who know all of the correct answers to a question; and
- percentage of respondents who know three correct answers to a question, two correct answers and so on.

#### *Score*

For a score-based indicator of knowledge, each respondent is given a score based on the number of correct responses provided. The knowledge score of the population is calculated for each question by dividing the total number of correct responses by the number of respondents who answered the particular question. Exclude respondents who did not answer the question, or for whom information is incomplete.

$$\text{Score of knowledge per question} = \frac{\text{Sum of correct responses given by all respondents}}{\text{Total number of respondents}}$$

## Attitudes

### *Definition of attitudes*

Attitudes are emotional, motivational, perceptive and cognitive beliefs that positively or negatively influence the behaviour or practice of an individual (16, 22). An individual's feeding or eating behaviour is influenced by his/her emotions, motivations, perceptions and thoughts (23). Attitudes influence future behaviour no matter the individual's knowledge and help explain why an individual adopts one practice and not other alternatives (10). The terms attitude, beliefs and perceptions are interchangeable.