**Questionnaire design**

A questionnaire is a document designed for the purpose of seeking specific information from the respondents.

**Types:**

The questionnaire may be
1- self-administered
2- Administered by interviewers.

The self-administered questionnaire approach is cheap, less susceptible to interviewer bias and can be administered by mail. At the same time, the rate of non-response may be high, and may bias the results. Also, answers may be incomplete.

**Types of questions:**

There are two major question formats:
1- The open-ended and closed-response types.
2- closed-response question, the respondent is provided with a list of predetermined response options. Open-ended questions elicit more detailed responses, but the responses require more effort to encode for data analysis.

A questionnaire may include both question formats.
Closed-response questions may be used to elicit attitudes of the respondents to a certain statement. format, the respondent chooses from among: strongly agree, agree, undecided, disagree, strongly disagree. In the forced-choice format, responses are limited to: strongly agree, agree, disagree, and strongly disagree. This format does not allow an undecided answer.

Questions should be well worded to avoid any ambiguity. Questions should not be phrased in a way that influences the response in one direction or another. The questionnaire should always be pre-tested in a pilot study before the main survey. Interviewers should be trained to make sure that the questionnaire is administered in a uniform way.

A questionnaire typically includes the following components:
- an introductory statement by the interviewer to introduce herself/himself and explain the purpose of the questionnaire; the respondents should also be informed about the confidentiality of their responses;
- demographic questions to collect relevant information about the background of the respondent;
- factual questions; opinion questions: opinion questions require reflection; it is generally easier for the respondent to answer factual questions; putting the factual questions first serves as a “warm up” to the opinion questions;
- closing statement by the interviewer to thank the respondents, and where appropriate to ask if s/he wants to provide any additional comment.
A method commonly used to test for reliability in results obtained by questionnaires is to look for internal consistency, that is the extent to which the responses on different questions correlate with each other. If they tend to be highly correlated with each other, then the test is said to be internally consistent. The computer programme can be built up to detect inconsistency. There is a tendency among investigators to put too many questions. This has been encouraged by the introduction of computer-assisted analysis. Information collected in a questionnaire should be based on and limited to the objectives of the study.