
MEDICAL RESEARCH
MODIFIED NO. 4
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Part 3: Questionnaires

Color code
Slides
Doctor
Additional info
Important

- Note: There are some slides that the doctor explained in the lecture but are not included in the material uploaded on the e-learning. We added those slides, some of them got red titles while other will have the following note (This slide is from the dr's lecture) . This is a long but, hopefully, easy lecture, take a deep breath, and let`s go!!!

Definition of Questionnaire

A series of questions designed to gather information on a certain subject from a respondent

- A tool for data collection
- A series of written questions in a fixed, rational order where we can get

information from subjects on knowledge, attitudes, beliefs, socioeconomic characteristics, medical history, etc.

Chart review form/Case report form

You need to differentiate between survey questionnaires and chart review forms. A survey questionnaire is a tool through which we collect data from participants through direct face-to-face interviews or self-completed questionnaires.

However, a chart review form or a Case Report Form is a document recording all the patient's clinical information (past medical history, diagnosis, investigations, treatment, complications, financial data) based on their medical records/files (hard or soft copy), as required by the study protocol.

- Sometimes we get information from the interviews conducted. Still, we want to confirm the details regarding the length of their illness, the current course of treatment, the outcome, and the investigations. To do this, we consult the medical file, which can be obtained in hard copy or, if your hospital uses an electronic health system program, in soft copy. Occasionally, the entire study is predicated on the chart review form. For instance, if you wish to examine the results of treatment from various surgeries, obtain details regarding the grade of cancer, or review pathologic records and statistics regarding the incidence of a particular cancer stage or degree, or the degree of control over a variety of ailments, you can simply access the medical files, view the information, and download the entire research using the review form.
- Typically, we use a mix of chart reviews and questionnaires.

Why do we need develop a questionnaire?

- Survey questionnaires
- In the case of ready-to-use questionnaires, to collect relevant additional data such as demographics and predictors of response such as socioeconomic status and medical history
- Questionnaire to assess outcomes in clinical trials and other research methodology
- To collect data on variables relevant to research methodology such as predictors of response to treatment

Why do we need to develop a questionnaire?

1. To obtain all the information we need
2. To analyze the information
3. To answer the study question

- About ready-to-use questionnaires:

These are specialized instruments that have been approved for the evaluation of several factors (validated), including quality of life, clinical indicators, pain scales, and psychology.

Let's say you have a ready-to-use hospital anxiety and depression scale, and you want to use it to evaluate patients who are hospitalized for specific illnesses, patients who have cancer, or you want to look at the quality of life of various patient populations or the general population.

Additionally, a survey that examines information such as social demographic status, medical history, medication history, degree of disease control, and other socioeconomic factors is necessary because these factors may have an impact on the study's outcomes.

Even in clinical trials, the primary outcome may be something like survival from the disease or the extent to which the disease is under control based on specific clinical investigations or outcomes. At the same time, we need to have some questionnaires or chat review forms to look at the predictors of response to treatment; these may include things like age, other medical conditions, and other social demographic factors that may have an impact on participants' responses in the study or study outcomes.

Structured versus unstructured

- In a structured interview each question is clearly defined and given a rigid sequence (Base of quantitative research)
- An unstructured interview resembles a discussion with the interviewer leading it (Part of qualitative not quantitative research)

Questionnaires

- Standardized, structured instruments
- Include open-ended or close-ended questions but focus on close-ended questions
- Administered in a standard way (The most important aspect)
- Interviewer-administered or respondent-completed
- Paper-and-pencil or computer-assisted (You have a survey you want to share with students about smoking rate/status or anxiety among medical students, you can share it via e-mail or distribute it among groups to gather responses)

Open-ended questions:

•These questions allow respondents to provide answers in their own words, offering detailed and descriptive responses. There is no predefined set of answers; the respondent has the freedom to express opinions, elaborate on their experiences, and provide as much detail as they wish.

Close-ended questions:

•These questions provide respondents with a predefined set of responses, such as multiple-choice options, yes/no answers, or rating scales. The respondent selects the answer that best matches their opinion or situation.

•Example of open-ended question that are discussed within the standard close ended question : The patient was asked "what best you had experienced during your hospitalization?"

(approach of staff , availability of treatment , etc.) you may add items the patient might say

Questionnaires are best used when:

- There is a large sample (If participants are from the general population, or your study is about a common illness, you might have a large sample size)
- You want fairly straightforward information
- You want standardized data from identical questions and preferably in the presence of a reference manual
- You are more interested in what occurs rather than why or how

A reference manual is a detailed guide or document that provides instructions, definitions, and explanations related to the questionnaire. It is designed to ensure consistency in how the questionnaire is administered, understood, and interpreted, both by the researchers and the respondents.

Example:
If you want to investigate the prevalence of heartburn among Gastroesophageal Reflux Disease (GERD) patients, one of the questionnaire items is going to be: "Do you experience heartburn, and if so, how often do you experience it?" and the responses are (always, often, sometimes, rarely, never).
You need to state what each of the responses represents (The reference manual)
Always: Every day during the week
Often: Five or six days per week
Sometimes: three or four days per week
Rarely: two days per week
Never: No days per week
So to ensure that the assistants, who are working with you in the field, explain this item to the respondent in the same way, you should have a reference manual.

Advantages of using a questionnaire?

- Target large amount of people (At different locations)
- Use to describe, compare or explain
- Can cover activities and behaviour, knowledge, attitudes, preferences
- Specific objectives, standardised and highly structured questions
- Used to collect quantitative data – information that can be counted or measured

Strengths

- Reach respondents in widely dispersed locations
- Can be relatively low cost in time and money
- Relatively easy to get information from people quickly
- Standardized questions (The most important)
- Analysis can be straight-forward and responses pre-coded
- Low pressure for respondents (Especially for self-completed questionnaires)
- Lack of interviewer bias in the case of self-administered questionnaires because we are confident that we have the same questions throughout the study especially if we have a reference manual

Questionnaires help us to:

- To generalize from a sample to a population
- Assess:

1. What people think (attitudes and opinions)
2. What people do (behaviors) and what they want
3. What people prefer
4. What people know
5. Their sociodemographic characteristics

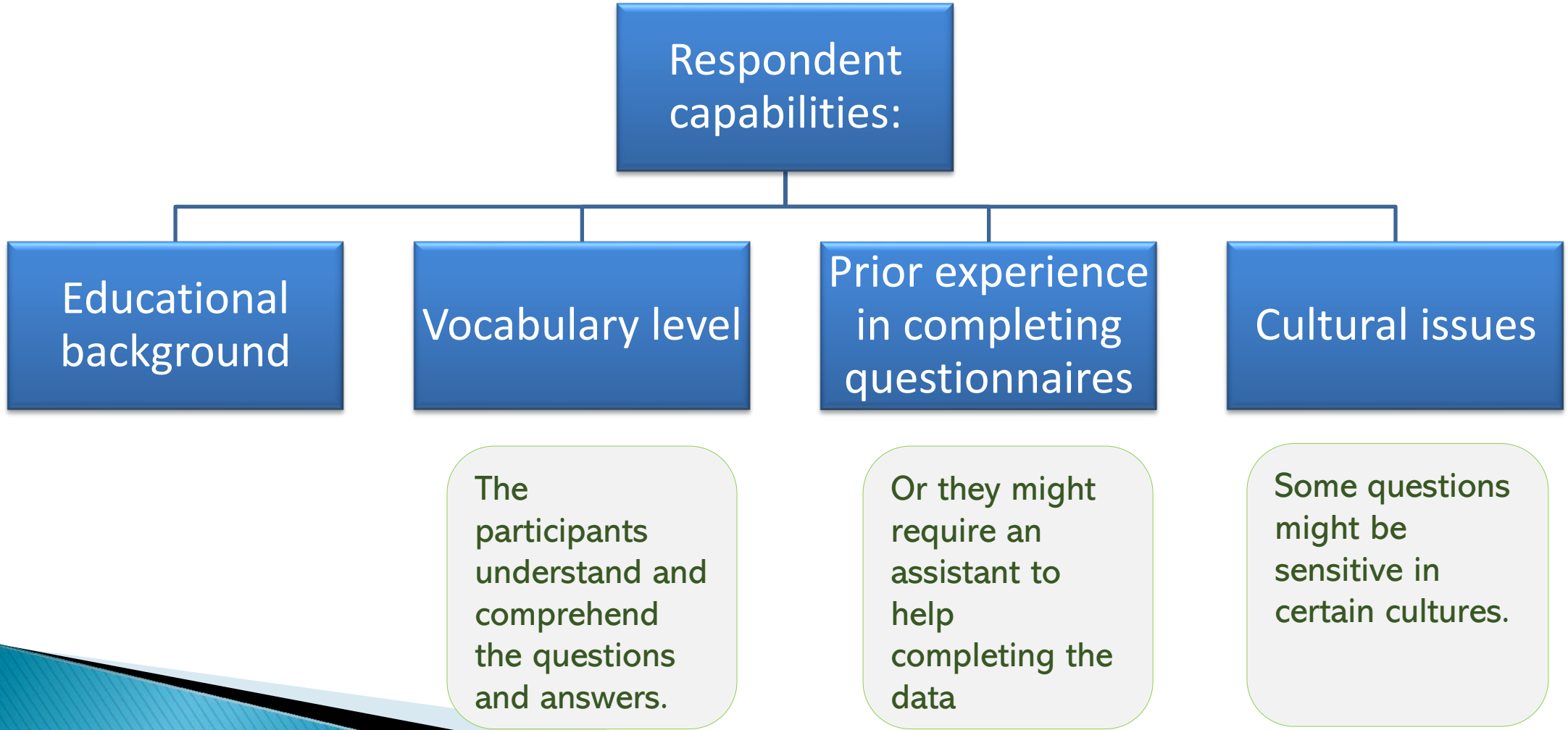
Types of Questionnaires

1. Face-to-face (personal) interview e.g., door-to-door interviews

- Interviewer administers the questionnaire
- Ensure consistent and complete responses
- Allows for clarification and probing
- High response rate
- Expensive (limitation)
- Confidentiality and privacy concerns (Sensitive questions require the right time and place)
- Interviewer bias (Can be reduced by training interviewers and using manuals)

When administering questionnaires through interviews, to get a representative sample, make sure that you do not use convenience sampling. For example, if you want to assess the satisfaction of JU students, do not just interview the students at the main gain in the morning (convenience sampling), rather, interview students at different gates at different times of the say (probability sampling).

Interviewer-assisted Questionnaires



Interviewer-administered questionnaire

- Advantages
  - participation of illiterate people
  - clarification of ambiguities
  - quick answers
- Disadvantages
  - interviewer bias
  - needs more staff resources
  - difficult for sensitive issues

(Better to use self-completed questionnaires)

  - Time needed

Types of Questionnaires

2. Self-completed questionnaire
   e.g., mailed questionnaires

- Completed by respondent
- Requires literate respondent
- Variable completeness of answers (major issue)
- Low-cost
- Low response rate (major issue)
- No instructions or check on incomplete responses: Instructions can be provided but incomplete response is still a limitation

Self-administered Vs interviewer administered

- Self-administered questionnaire (as opposed to interviewer-administered) requires:
  - More instruction for respondent (Clarification, explanation, i.e.: "If you answer question 2, go to question 10"
  - Clear-cut, unequivocal wording
  - More pre-coded questions
  - A separate coding sheet for analysis

We can improve the questionnaire by piloting before using it in the study.
A **pilot study** is a small-scale, preliminary study conducted before a full-scale research project or survey. It is designed to test the feasibility, methodology, and potential challenges of the main study. The goal is to identify and resolve issues, refine research design, and improve the overall effectiveness of the research.

Self-administered questionnnaire

- Advantages
  - cheap and easy to administer
  - preserves confidentiality
  - completed at respondent's convenience
  - not influenced by interviewer

You can administer many subjects in a short period of time

- Disadvantages
  - low response and incompleteness
  - questions can be misunderstood
  - no control by interviewer
  - only literate persons
  - time delay (post) when giving in back to the clinic or by post

Subjects might check the boxes without reading the question carefully

Types of Questionnaires

3. Telephone interviews (Mainly in the states, was used in Europe, especially UK)
   - Wide coverage rate
   - Standardization depends on the interviewer
   - Medium cost: lower cost than personal interviews because the assistants can phone people in their own office time, which means a smaller number of staff
   - Can be conducted quickly 5 to 10 min otherwise the person is not going to complete the interview
   - Miss those without a telephone or at work or those who do not respond to strangers or prefer not to provide personal information
   - Interviews have to be kept short, otherwise, the response rate decreases
   - Medium response: better response rate than mailed questionnaire

At the convenience of the participants, they can choose the best time for them to answer all questions.

At the convenience of the participants, they can choose the best time for them to answer all questions.
In some studies, the researchers and investigators can conduct a combination of face-to-face interviews and telephone interviews, by meeting people, introducing them to the study, obtaining their phone numbers, and calling them whenever they are available.

Survey Study Design: Summary

- Clear definition of the research question
- What method is the most appropriate?
- Who will be surveyed?
- How will the survey be carried out? 1)Face-to-face or 2)Self-completed
- cross-sectional survey
- longitudinal survey
- What analysis will be carried out?
- THEN, develop the survey instrument!

The idea of sampling techniques is that you have a large population, and you need to get representative sampling of that population

Sampling techniques

A Word About Sampling…

- The population is all the members of the group you are researching (e.g., all youth in our city)
- The sample is the selection of the population who will be asked questions
- To generalize is to state that what you say about your sample can be applied to the rest of the population

We always want our sample to be representative and sufficiently powered.

A **representative sample** is a subset of a population that accurately reflects the characteristics of the larger group from which it is drawn. The goal is to ensure that the findings from the sample can be generalized to the entire population.

A **sufficiently powered sample** refers to a sample size that is large enough to detect a statistically significant effect if one exists. The concept of **statistical power** is related to the ability of a study to detect meaningful differences or relationships in the data.

General limitations of questionnaires

Be very careful when you design your questionnaire !!!! Have a literature review, look at all the previous studies, consult with experts, do a pilot study, and analyze the data to make sure no information is missing. The more you invest in your preparation, the better outcomes !!!

- Can be superficial – difficult to capture the richness of meaning (will not achieve study outcomes)
- Information is not causal – cannot attribute cause-effect relationships
- Information is self-reported, which does not necessarily reflect actual behavior (for example, if you inquire about smoking or drinking alcohol in females, you might receive false information)
- Cannot deal with context – information is collected in isolation of environment

General Limitations in Questionnaires

- Provide only limited insight into a problem
- The range of possible responses is limited
- The question may be misleading

- Varying response
- Unclear questions can lead to misunderstanding and misinterpretation

- Do not allow for mistakes
- Must be right from the beginning
- Missing data hard to chase

Other limitations

- Low response rate and consequent bias and confidence in results (That is why we do piloting, to figure out how best to reach participants)
- Unsuitable for some people
  - e.g. poor literacy, visually impaired, young children, people with mental illnesses
- Question wording can have a major effect on answers (Questions with complex scientific and medical terms will be difficult to understand for most people)
- Misunderstandings cannot be corrected

(Because you have already collected your data, otherwise, you have to repeat the study)

Questionnaire Sections

Opening questions (Sociodemographics)

Research topic questions

Classification questions

We start the questionnaire with things that build trust with the participants, including information about age, gender, and sociodemographic characteristics. And we need to keep sensitive questions till the end, to ensure that we have good trust and that the participants can answer these questions.

Clear Specification

This is unethical, if you ask too many questions outside the determined objectives, the survey will be long, and you will not get all the answers, or it may be left unanswered.

Preparing and Presenting Good Questions

- Use simple words
- Be brief
- Avoid ambiguity
- Avoid leading questions
- Avoid double-barreled questions
- Be careful about question order and context effects
- Check questionnaire layout (No decoration, easy)
- Prepare clear instructions (For respondents and assistants)

- A **leading question** is one that subtly prompts or influences respondents to answer in a particular way. Instead of being neutral, the wording of the question suggests a preferred answer or guides the respondent toward a specific response. This can lead to biased or unreliable data. ("Does smoking increase the risk of disease by 30%?")
- A **double-barreled question** is a single question that asks about two different issues or topics but only allows for one answer. This can confuse respondents and lead to unreliable data because they may have different opinions on each part of the question but are forced to give a single response. ("Do you eat healthy food and exercise?")
- **Question order and context effects** refer to how the sequence of questions can influence how respondents understand and answer them. If questions are arranged poorly, responses to earlier questions can affect how later questions are interpreted or answered, leading to biased or skewed results. This is particularly important when questions are related or touch on sensitive topics. For example, if a respondent is first asked about their **smoking habits** (a behavior often associated with health risks), it could create a context that makes them more self-conscious about their health. After this, if they are asked about **physical inactivity** (another behavior linked to health problems), they may be more likely to downplay or alter their responses about inactivity, because they feel they've already admitted to one unhealthy behavior.

Type of questions

Types of Questions

A. Open-end questions
B. Close ended questions
   - Two-choice
   - Multiple choice
   - Checklist
   - Numerical
   - Ranking
   - Rating

Be familiar with all these terms and try to write your questionnaire from scratch.

Questions selection

- Choice of question type depends on:
  A. Information required
  B. Question itself
  C. Study design:

Examples:

- What are the causes of ischaemic heart disease?
- From the following list, select factors that you think could cause heart disease
- But avoid:
  Is smoking a risk factor for heart disease?

"Is smoking a risk factor for heart disease?"
This is a leading question; everybody will say yes. The correct way is by using, for example, an open-ended question, such as: "What are the causes of ischemic heart disease?", you will receive answers like a fat-rich diet, physical inactivity, smoking, etc. You see if the answers are right or wrong then you note them in your sheet. An alternative way, especially, in self-completed questionnaires, you add 30 risk factors, and the subjects need to click on the right ones.

Fill in the blank

These are open-ended questions. You need to have key answers to quantify the responses.

My choice for the residency program would be . . . . . .

. . . . . .

What do you think of the care you receive at the clinic?

_____

_____

Rating scales

Are you satisfied with the care you receive at the clinic?

Extremely Dissatisfied 0 _____ 10 Extremely satisfied

OPEN END QUESTIONS

- Are asked without specific response options or when we want to hide the answer.
- Respondents need to create their own answers.
- The questions are great for depth and unbiased opinions, but difficult to quantify
- Best used when having multiple responses and the options may be too leading and result in biased answers (You will add a section where you allow the respondents to add comments)

  e.g.

  1. type of medical services they would like us to provide
  2. what are the risk factors of ischaemic heart disease.

Sometimes you can pre-code an open-ended question if you know the type of responses you will get

Types of questions

Open-ended questions (Covered more in quantitative research) What? Why? How?

- No predetermined responses given
- Able to answer in own words
- Useful exploratory research and to generate ideas
- Flexible
- Requires skill in asking questions and interpreting results
- Answers can lack uniformity and be difficult to analyze (Main issue)

Open-Ended Questions

- Answered in the respondent's own words
- Allows the respondents to interpret the question and answer any way they want
- Blank spaces left after question for written responses
- More demanding and time-consuming for respondents
- More difficult to analyze and interpret

  Example: "Please describe your ideal boss."

Open ended questions

- Advantages
  - Allows a much greater range of responses
  - Allows for creativity
  - May find unanticipated results
- Disadvantages
  - Statistical analysis is very difficult (Key limitation)
  - Large variety of responses
  - Takes much longer
  - Interpretation of results is more difficult

We did a national study on access to primary healthcare services and we started focus groups with open-ended questions and based on these focus groups, we managed to get different responses that helped us develop a survey questionnaire through close-ended questions through a cross-sectional study.

Close-ended questions

close ended questions are easy to quantify

- Designed to obtain predetermined responses
- (Yes/No; True/False; strongly agree-strongly disagree, etc..)
- Easy to count and analyze (Easy to quantify)
- Easy to interpret
- May not have catered to all possible answers

(That is why sometimes we add “other option”)

- Questions may not be relevant or important to study objectives

(We need to know when to use yes/no questions or when to have different answers)

Close-ended questions

- Respondent selects a response from those provided on the questionnaire
- Less time consuming and easier for respondent
- Requires more effort to develop questions
- May oversimplify an issue
- Response categories must be inclusive and non-overlapping (i.e., mutually exclusive)

Types of Close-ended Questions

- Two-choice – Have you heard of the Alberta Community Council on HIV? (yes or no)
- Multiple choice – How often will you use the information from this workshop? (never, sometimes, all the time)
- Checklist – Please select all the services that you have used in the last year: (list)
- Numerical – How old are you? _____
- Ranking – Please put these postcards in order from the one you like the most to the one you like least.
- Rating – "This workshop is boring me" To what extent do you agree with this statement?

  (on a scale from 1=strongly agree to 5=strongly disagree)

Closed-ended questions

- The discharge summaries from Hospital X allow me to provide adequate care to my patients:
  - Strongly agree
  - Agree
  - Neutral
  - Disagree
  - Strongly disagree

- Which of the following describes your marital status?
- Married
- Single
- Widowed
- Separated
- Divorced

Closed ended questions

- Advantages:
  1. Easier for participants to respond
  2. Standardization
  3. Easy to count and analyze
  4. Easy to interpret

- Disadvantages:
  1. May not have catered for all possible answers (This is your responsibility as an investigator to ensure that you have the most important answers in the questionnaire)
  2. Questions may not be relevant or important (Also your responsibility as an investigator)
  3. Answer options can influence responses

Partially Open-Ended Questions

- Include “other” and specify “other”

In the context of **partially open-ended questions**, researchers combine predefined answer choices with the option for respondents to provide their input if the available choices don't fully capture their experiences. This approach allows for both **quantitative** data (from the predefined answers) and the opportunity to gather **qualitative** insights (from the open-ended "other" option), which can provide additional depth and flexibility in the responses.

Example:

When conducting studies related to **barriers to mammographic screening**, **access to primary healthcare**, or **other public health problems**, researchers may not be able to anticipate every possible response a participant might have. To ensure they don't miss out on important insights, they add an "other" option at the end of multiple-choice questions. This "other" option allows participants to express barriers or issues not listed in the predefined responses.

Closed Questions Checklist

- Which of the following clinics have you visited during the last five years?

❑ Family medicine

❑ Cardiology

❑ General surgery

❑ Ear, nose, and throat

❑ Vascular surgery

- This is the wrong way because if the patient has visited them all, all the boxes would be ticked

- Which of the following clinics have you visited during the last five years?

❑ Family medicine (Yes, no, do not remember)

❑ Cardiology (Yes, no, do not remember)

❑ General surgery (Yes, no. do not remember)

❑ Ear, nose, and throat (Yes, no, do not remember)

❑ Vascular surgery (Yes, no, do not remember)

- This is the right way!!!!

Scales

- Scales are devised to measure the attitudes or characteristics of respondents

- There are four different forms of measurement scales:
  - Nominal
  - Ordinal
  - Interval
  - Ratio

This slide is from the dr's lecture

Rating scale

In order to have the right correct answer and to have it in the structured way we need to clarify what do we mean by always sometime seldom ….
Ex : (always 4-5 times per week)

15 – How often did you experience heartburn during the past weeks?

	Always	Sometimes	Seldom	Never
Mornings	☐	☐	☐	☐
Lunchtime	☐	☐	☐	☐
Evenings	☐	☐	☐	☐

* In the manual, we should define: always, sometimes, seldom and never

This slide is from
the dr's lecture

Rating scale

Numerical

16 - How severe was your pain after your fall?
(please circle)

1 2 3 4 5 6 7

Not painful at all *Very painful*

Analogue

17- How severe is your pain (put the tick on the line)

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Likert Scale

- Rensis Likert, 1903–1981
- Psychometric scale
- Five (or more) ordered response levels

18 – Ethnic minorities have the rights to have the same access to health care services

- ☐ *I strongly disagree*
- ☐ *I disagree*
- ☐ *I neither agree or disagree*
- ☐ *I agree*
- ☐ *I strongly agree*

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Nominal Scales

- A nominal scale describes a variable with categories that do not have a natural order or ranking.
- You can code nominal variables with numbers if you want, but the order is arbitrary and any calculations, such as computing a mean, median, or standard deviation, would be meaningless.
- Examples of nominal variables include:
- genotype, blood type, zip code, gender, race, eye color, political party

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Nominal Scales

- Nominal scales are used to classify things into categories
- It is the weakest form of measurement
- Data may be totaled

E1. Where do you live:

A. Rural area

B. Urban area

E2. What type of helicobacter pylori test do you use in your practice?

1- Stool

2- Breath

3- Serum

4- Biopsy sample during endoscopye

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Ordinal scales

- An ordinal scale is one where the order matters but not the difference between values.
- Examples of ordinal variables include:
- socio economic status ("low income","middle income","high income"), education level ("high school","BS","MS","PhD"), income level ("less than 500JD", "500-1000JD", "over 1000JD"), satisfaction rating ("extremely dislike", "dislike", "neutral", "like", "extremely like").

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Ordinal scales

- Note the differences between adjacent categories do not necessarily have the same meaning.

- For example, the difference between the two income levels "less than 500JD" and "500-1000" does not have the same meaning as the difference between the two income levels "500-1000" and "over 1000".

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Ordinal Scales

- Allow classification
- Ordinal scales also imply rank ordering
- There is no difference between the importance of the choices

The hospital support staff are:

1. Extremely Helpful
2. Very Helpful
3. Moderately Helpful
4. Not Very Helpful
5. Not Helpful At All

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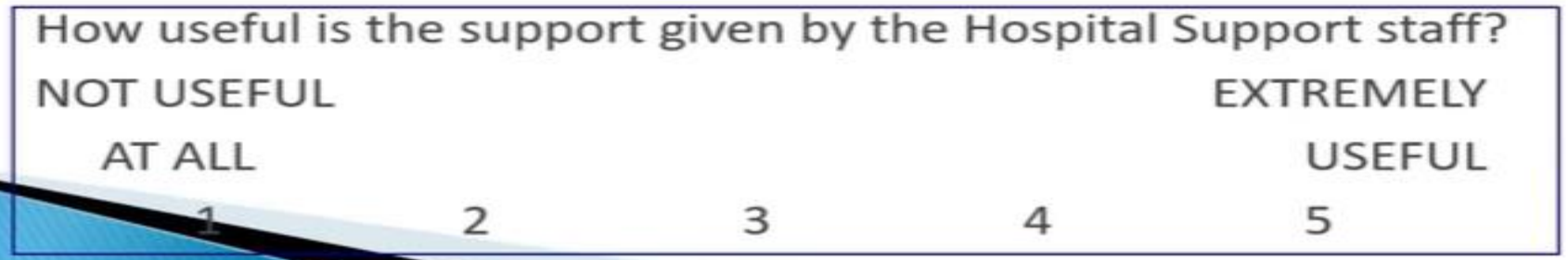
Interval Scales

- An interval scale is used when the intervals are equal
- There is no absolute zero
- An interval scale is one where there is order and the difference between two values is meaningful.
- Examples of interval scales include the centigrade scale, pH



Ratio Scale

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- is defined as a variable measurement scale that not only produces the order of variables but also makes the difference between variables known along with information on the value of true zero
- It can be discrete or continuous
- Number of people in a household- Discrete
- Number of experience years- Continuous
- Duration of illness –Continuous
- What is your height in centimeters

A. Less than 130 CM
B. 130–165 CM
C. 165–180
D. More than 180

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Ratio

- A ratio variable, has all the properties of an interval variable, and also has a clear definition of 0.0. When the variable equals 0.0, there is none of that variable.
- Examples of ratio variables include:
- enzyme activity, dose amount, reaction rate, flow rate, concentration, pulse, weight, length, survival time.

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Ratio

- When working with ratio variables, but not interval variables, the ratio of two measurements has a meaningful interpretation.
- For example, because weight is a ratio variable, a weight of 4 grams is twice as heavy as a weight of 2 grams. However, a temperature of 10 degrees C should not be considered twice as hot as 5 degrees C.
- Another example, a pH of 3 is not twice as acidic as a pH of 6, because pH is not a ratio variable.

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Branching Questions

Are used to direct respondents to answer the right questions as well as questions in the proper sequence.

Screening or Filter Questions:

You have a questionnaire, and you want to look at the quality of life or the medical history of smokers, or you wish to study the attitudes of smokers, you'll start by asking the respondents today: "We are conducting a study on attitude smoking, do you currently smoke cigarettes, Shisha, or pipe? If they say no, you apologize to them and here you don't complete the study but you have information about the number of non-smokers, but if they say yes, you'll continue the study.

Are used to ensure respondents included in the study are those that meet the pre-determined criteria of the target population.

"Today we are conducting a study on attitudes of smokers, do you currently smoke tobacco (cigarettes, narjeela, pipe)?" ___Yes ___No

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Rapport Questions:

Opening questions, to build trust with the participants.

are used to establish rapport with the respondent by gaining their attention and stimulating their interest in the topic.

"Have you experienced any abdominal pain in the last month?"

__ Yes __ No

"What is the best thing about your stay in the hospital?"

And then, you start asking questions about satisfaction.

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Type of information

- *Knowledge – what people know*
- *Opinions, attitudes, beliefs, values –*
- what people think about an issue
- *Behavior – what people do*
- *Attributes – what are people's*
- characteristics

Type of information

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Knowledge

- What is the recommended interval between eye checks for patients with uncomplicated diabetes?

A. 6 months
B. 1 year
C. 2 years
D. Not sure

Type of information

Opinions etc

- What do you think are the major issues affecting primary healthcare in Jordan at the moment?

Type of information

Behavior

- Have you developed a care plan for any of your patients?

A. Yes

B. No

Type of information

Attributes

- When did you graduate from university?

Type of information

Filter questions

Filter questions useful to ensure respondents only answer relevant parts of questions

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Type of information

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- **Filter questions**

1. Unfiltered:

– If you use an electronic health program, which one do you use?

2. Filtered:

– Do you use an electronic health program?

A. No – jump to next question

B. Yes – which one?

Do you smoke

A. Yes, include

B. No, exclude

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Type of information

Filter questions

'Skips' in questionnaires more easily managed if these are computer-assisted

- Consider including 'not applicable' category:

– In the past week, how often have you used MEDLINE:

a. Not at all
b. At least once
c. More than once
d. I do not have access to MEDLINE

SENSITIVE QUESTIONS

- Researchers sometimes ask sensitive questions in surveys.
- Respondents are often hesitant to answer sensitive items, so item non-response on these questions is normally higher than for other questions in a survey.
- Some respondents may even stop taking the survey because a sensitive question turns them off from the process.

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Examples of sensitive questions

Breast cancer quality of life questionnaire: EORTC QLQ – BR23

- Have you been feeling less feminine as a result of your disease or treatment?
  1. Not at All
  2. A Little
  3. Quite A Bit
  4. Very Much
- During the past four weeks: To what extent were you interested in sex?
  1. Not at All
  2. A Little
  3. Quite A Bit
  4. Very Much
- To what extent were you sexually active? (with or without intercourse)
  1. Not at All
  2. A Little
  3. Quite A Bit
  4. Very Much

How to deal with sensitive questions?

1. Build Rapport with Respondent:
   - Quite often, it is best to start a survey with neutral questions, and let the respondent work his or her way through the survey, letting each question lead up to the information you need to ask about.

   - Placing controversial questions late in the questionnaire has two benefits:

   If the respondent chooses to stop the survey once he or she reaches the sensitive questions, you still have the respondent's answers to all questions beforehand, upon their consent, which you can use for other analyses.

   The respondent works through the easy, unthreatening questions, he or she may feel as though trust is being established and will be more likely to answer the questions asking sensitive information.

How to deal with sensitive questions?

2. Questions order

- It is generally not a good idea to start the survey with any question that touches on something private.

- When respondents start a survey, they are generally not drawn into the process yet or committed to finishing it.
- Sometimes respondents start a survey to see if the first few questions are interesting, then decide whether it is worth finishing it.
- Putting a sensitive question up front immediately raises a red flag with respondents who have privacy concerns and increases the likelihood that they will break off the survey.

How to deal with sensitive questions?

2. Questions order (cont'd)

- It is better to lead the questionnaire with simple items that draw respondents into the survey process and engage their interest. (Sociodemographics)

- If there are no other viable alternatives, it is acceptable to start the survey with simple demographics, but this approach is not ideal.
- **Never put a sensitive question with concerns first.**

How to deal with sensitive questions?

2. Questions order (cont'd)

- Placing controversial questions late in the questionnaire has two benefits:

1. If the respondent chooses to stop the survey once he or she reaches the sensitive questions, you still have the respondent's answers to all questions beforehand, which you can use for other analyses.

2. The respondent works through the easy, unthreatening questions, he or she may feel as though trust is being established, and will be more likely to answer the question asking the sensitive information.

How to deal with sensitive questions?

3. Be Casual About it!

- Let’s assume you are trying to assess poor compliance with medications.

- Getting truthful responses can be very difficult. You, therefore, need to try reducing the perceived importance of the topic by asking the question in a nonchalant manner:
- “Did you happen not to take your medications while remembering that you need to take them?”
- Worded this way, the question leads the respondent to believe the survey’s authors do not think that not taking the medications is a big deal, so the respondent may be coaxed to answer truthfully.

How to deal with sensitive questions?

4. Make it Sound Like “Everybody’s Doing It!”

- Instead of directly asking a respondent if he or she is not taking his/her medications, ask if they know of anyone who does. “Do you know that some patients are not taking their medications regularly?”
- Then the next question could be “How about you?”
- When he or she feels he/she isn’t alone, the respondent may be more inclined to be honest. They will not feel ashamed or blamed.

- Another way is to combine the casual approach with this one:

  “As you know, many people are not taking their medications regularly, although they remember that they need to take them. Do you happen to have not taken your medications, while remembering that you have to do so?”

How to deal with sensitive questions?

5. Choose Longer Questions Instead of Shorter Ones

We follow this only in sensitive questions:

- Longer questions can “soften the blow” with the excess verbiage, and reduce the threat.
- Consider these examples:

“Even some of the health care professionals do not take their medications regularly. Have you, yourself, not taken your medications while remembering that you need to do so?”

“ The Ministry of Health reported recently widespread practice of missing taking medications regularly amongst patients with chronic diseases that have lead to high rates of uncontrolled diseases. Have you happened not to take your medications while remembering you need to do so?”

“Did things come up that kept you from taking your medications regularly while remembering you need to do so?”

How to deal with sensitive questions?

6. Anonymity and Confidentiality

- Always reassure respondents about their anonymity or confidentiality in the introduction to the survey.
- Remind them of these assurances later in the survey when introducing sensitive questions.
- Researchers may even want to state explicitly that no one (outside of the research team) will ever be able to match respondents' identities to their answers.
- For demographic questions, it sometimes helps to say that these questions are asked for analysis purposes only. Respondents may be put at ease the more researchers can reassure them of their privacy, so repeat these reassurances as often as needed.

- In some studies, the ethical committee will request that the researchers get a consent form. However, do not ask the patient to complete a consent form if your research includes a survey questionnaire. They will be asked to submit personal information in the questionnaire, and they may be reluctant to do so. Thus, the consent form is not required if the survey is being conducted without blood collection or patient medical record verification.

  Additionally, by not requesting the respondents' names, birthdates, or any other identifying information, you'll motivate them to give accurate responses and ensure that they answer any sensitive questions or participate in the study.

How to deal with sensitive questions?

7. Try self-completion approach

- Respondents are more hesitant both to answer sensitive questions in the first place and to answer them truthfully in modes where a human interviewer is present. Thus, social desirability bias and privacy concerns are bigger issues in face-to-face and phone surveys.
- Respondents feel less anonymous in these formats and prefer to project a positive image to the interviewer, so they are less willing to disclose sensitive information.
- However, surveys administered without a human interviewer reduce sensitivity effects substantially.

While we are talking about illiterate subjects here, we should make the questions longer and chattier and try to present the sensitive questions in a way that makes them feel comfortable answering them. If we have literate respondents, we may give them private questions to answer in a self-completed survey

How to deal with sensitive questions?

7. Try self-completion approach (cont'd)

- Respondents are more willing to disclose private and socially undesirable information about themselves in web and mail surveys where there is not the pressure of maintaining a positive image in front of an actual human being.
- Self-administered surveys overall tend to yield lower data quality and lower response rates, but this approach may be worth greater disclosure on sensitive items.

Summary

- Make sure everyone will interpret the question the same way
- Specify the frame of reference
- Avoid leading questions
- Avoid double-barreled questions
- Avoid questions that contain double negatives
- Be aware of the impact of “socially desirable” phrases
- Make sure questions are applicable to all respondents
- Make sure response categories are mutually exclusive

- Pilot the questionnaire
- Ensure that the answers are comprehensive

Great job!!!!!
You made it
👏👏👏

لنجعل نياتنا صافية, ولنبذل الجهد بكل اجتهاد واجتهاد.
في وسط التحديات والضغوط الدراسية, لا تنسوا أن الله
مع الصابرين, وأن التوكل عليه يمنح الطمأنينة والنجاح.
احمدوا الله على الفرصة التي منحكم اياها للتعلم
واستمروا للسعي نحو العلم بتواضع وصبر.

VERSIONS	SLIDE #	BEFORE CORRECTION	AFTER CORRECTION
V1→ V2			
V2→V3			

امسح الرمز و شاركنا بأفكارك لتحسين أدائنا !!