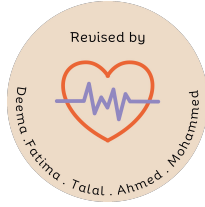


Research
442



Designing questionnaire & study tools

Tutorial No. 7

Objectives:

- ~ This lecture was presented by **Dr. Abdulaziz Almezam**
- ~ It is included in the **Midterm Exam**
- ~ We highly recommended reading the **Ayah** in the first page

Slides

Color code

Original text

Dr. Notes

Important

Golden note 

Extra



Editing file

Designing Questionnaires

It is necessary to always keep in mind that design of questionnaire influences data quality and thereby the results. Hence it is vital to design a good questionnaire.

Necessary Details to Know Before the Designing of Questionnaire

1 Clear objectives and research question

2 Target population

3 Precise definitions of all measurement variables

سُبْحَانَ الْعَبْدِ الْكَوْبَرِ

أَوْلَمَ يَرَوْا أَنَّا جَعَلْنَا حَرَمًا مَّاءً آمِنًا وَيَتَخَطَّفُ النَّاسُ مِنْ حَوْلِهِمْ أَفَبِالْبَاطِلِ يُؤْمِنُونَ وَبِنِعْمَةِ اللَّهِ يَكْفُرُونَ ﴿٦٧﴾

المختصر في التفسير

أولم ير هؤلاء الجاحدون لنعمة الله عليهم حين نجاههم الله من الغرق نعمة أخرى؛ هي أنا جعلنا لهم حرماً آمناً يؤمنون فيه على دمائهم وأموالهم، على حين أن غيرهم تُشَنَّن عليهم الغارات، فيقتلون ويؤسرون وتُشرب نساؤهم وذرايرهم، وتُنهب أموالهم، أفعال باطل من آلهتهم المزعومة يؤمنون، وبنعمة الله عليهم يكفرون، فلا يشكروها لله؟!

When asking about marital status, it's wrong to ask only about being married or single. Instead, include widow and divorced statuses.



Types of Questions

Open ¹

- Open questions allow the respondent to answer freely.
- However, if opened ended questions are used, **then the methods for analyzing these responses should be considered during the design of the questionnaire. Smaller sample, qualitative**

→ **Example**

How do you rate Madagascar as an exotic destination?

Answer : _____

Closed ²

- Closed questions are questions which limit the response to a specified list of answers.
- The use of closed questions offers a number of advantages to the researcher, **including providing a set of standard responses that enable researchers to produce aggregated data quickly. Larger sample, quantitative**

→ **Example**

Do you feel that every case of domestic violence must be reported?



1- Smaller sample, why? Because the answers are repetitive.

2- Larger sample.

Categorization of Question

- Title, purpose and confidentiality details
- **Sociodemographic details**²
- Medical history
- Habits and personal details¹
- Measurements-clinical/biochemical
- And other title related question



Pilot or Pre-testing³

Piloting the questionnaire among a representative sample of the target population **in the same way** that it will be administered in the main study is essential and will help identify potential problems with the design or layout of the questionnaire

Points to remember

- 1 It is preferred to keep the questions **short and specific**.
- 2 Clear instructions on how to fill the questionnaire must be given.
- 3 Consent should be clearly mentioned on top of the questionnaire.

- Leave the age question as an **OPEN ENDED** question **DO NOT** put choices (ranges) you can later do that during data analysis on sheets.
- The validated tool (can be part of the questionnaire) is not the questionnaire.

Survey # _____	Hospital Name: _____	Department: _____	Ward: _____		
Age: _____	Date: _____				
Male <input type="checkbox"/>	Female <input type="checkbox"/>	Never	Sometimes	Usually	Always
1. During this hospital stay, how often did nurses treat you with courtesy and respect?					
2. During this hospital stay, how often did nurses listen carefully to you?					
3. During this hospital stay, how often did nurses explain things in a way you could understand?					
4. During this hospital stay, how often did doctors/health officers treat you with courtesy and respect?					
5. During this hospital stay, how often did doctors/health officers listen carefully to you?					
6. During this hospital stay, how often did doctors/health officers explain things in a way you could understand?					
7. I could distinguish between doctor/health officers and nurses.					
8. During this hospital stay, how often was the room you were sleeping in kept clean?					
9. During this hospital stay, how often was the area around you quiet at night?					
10. During this hospital stay, how often did staff make sure you have enough personal privacy?					
11. During this hospital stay, did you experience any pain?					
12. During this hospital stay, how often was your pain well controlled?					
13. During this hospital stay, how often did staff do everything they could to help you with your pain?					
14. During this hospital stay, were you given any medication that you had not taken before?					
15. Before giving you any new medication, how often did staff tell you what the medicine was for?					
16. Before giving you any new medication, how often did staff describe possible side effects in a way you could understand?					
17. Were you given information in a way you could understand what symptoms or health problems to look out for after you leave the hospital?					
18. Was it easy to find your way around the hospital?					
19. Is this your first time being treated at this hospital?					
20. On a scale of 0-10 (0 being the worst hospital, 10 being the best hospital), how would you rate this hospital?					
21. Would you recommend this hospital to your friends and family?					
22. Did you have to pay for this hospital stay?					
23. Do you consider this hospital stay too expensive?					
24. How would you rate your overall health?					
25. What is the highest grade or level of school that you have completed?					

Public awareness of Non-Alcoholic Fatty liver disease
 Thank you very much for your time and participation in this survey.
 Yes = Y, No = N, Don't Know = DN

- Age <20 20-40 41-60 >60
- Sex Male Female
- Ethnicity Caucasians Hispanics African-American Asian/Pacific Islander Others
- Education Elementary School High School College Postgraduate
- Has your doctor ever mentioned fatty liver? Y N
- Have you ever heard about Cirrhosis (Shrinkage of liver)? Y N
- Which of the following do you think can advance to cirrhosis? (one or more answers)
 Alcohol consumption Hepatitis B/ Hepatitis C infection
 Fatty liver
 Other - Please specify _____
- Which of these conditions do you think can cause fatty liver? (one or more answers)
 Obesity Diabetes Excess alcohol intake High cholesterol
 Lack of exercise
 Other (specify) _____
- Fatty liver is hereditary. True False
- Is there a treatment available for fatty liver? Y N DN
- Fatty liver is preventable. True False
- Do you think that fatty liver can occur in a non-alcoholic? Y N DN
- Do you think that fatty liver can be cured in its early stage? Y N DN
- How do you think doctors diagnose fatty liver? (one or more answers)
 Sonogram of liver blood tests
 Body weight /obesity Not sure
- Do you think fat in the liver can cause a serious health problem? Y N DN

1. Sociobehavioral factors
2. محددات السلوك والصحة
3. If you are doing a questionnaire, an online survey for instance, send a pretest survey (similar to your original one) to the same target population but on a smaller scale to define potential problems



Constructing a Questionnaire (Example 1)

Prevalence of Anemia Among Female Third Year Medical Students of KKHU



Aim

To determine the prevalence of anemia



Target Population

Third year female medical undergraduate students



Measurement Variables

Hemoglobin

Concent

Give a background about the research

- this survey is conducted to determine the level of anemia among female undergraduate medical student

Identity is unknown

For research only

Agree or not

- The identity will be remain anonymous and confidentiality of data will be maintained, and it will be used for research purpose only please sign to agree for participation.

Medical history ¹

- Were ever diagnosed? Yes or no.
- If yes, what is the cause?
- Are you on iron pills?
- Are you suffering from vitamin B12 Deficiency?

Sociodemographic information

- City
- ID
- Age

Clinical/lab investigations

- CBC
- Hemoglobin ²
- Height (cm) and Weight(kg; BMI) ²

1. Relating to the main objective(ex. Prevalence of anemia). In a simple and direct language.
 2. Put a free space not choices, then divide it while doing data analysis. Same thing with age.

Example 2

Prevalence of Overweight and Obesity Among Adolescent School Children



Aim

To determine the prevalence of overweight and obesity



Target Population

Adolescent school children aged 13 years to 18 years¹



Measurement Variables

Height and weight

Consent

- Give a background about the research
- Identity is unknown
- For research only
- Agree or not
- **Permission from parents**

Socio-demographic details

- Gender
- Age → date of birth
- school type
- Residency
- Income

Anthropometric measurements

- height (cm)
- weight (Kg)
- BMI(kg/m²)

Dr's Notes

- The difference between tool and questionnaire, is that the questionnaire involves a set of questions and the tool is a part of it. Also, the tool is a set of questions that will give you a **score or measure** of a certain thing and it should be validated, (it is same as the lab test and it has to be taken all to give you an accurate measurement). **So, do not take some of the questions and drop some of them.**
- You have to define specifically what is your target population for, e.g., if your study is on diabetic patient who has been diagnosed for one year, so you have to make sure the participant has the inclusion criteria.
- To know how to choose close or open question when we want to discover a new idea or topic, at the beginning we have to have open-ended questions with a qualitative study to know what is the answers that can be framed and used in close-ended question.
- Doing pilot or pre-testing is vital, especially for those who have face to face interview.
- When it is come to how to put the question you are free to do the way of how making the questions if its answer yes or no, multiple-choice...

1. More targeted

القارة:
عبدالله الشهري
وهي التحمي

نواف التركي

ريان الفنامي

الأعضاء:

ليان البريكان
شهد المرشد
رغد النظيف
ريما الجريبة
شهد البخاري
نوف الضلعان
أمير الاحمري
وعد ابونخاع
نراء الهويش
في الدوسري
منار الزهراني

عبدالله التركي
محمد الزير
عثمان الدريهم
عبدالعزیز القططاني
ناصر الفيت
سعد السهائي
رائد الماضي
سعود الشعلان
عبدالله المياع
عبدالله النجريس
تركي العتيبي
عبدالله القرني
عامر الفامري
سعد الاحمري
معاذ آل سلام
محمد الحصيني

MCQs

Q1: A research group submitted the proposal to ethical review committee (ERC). The study involved interviewing patients at two stages: pre- and post-operative, each stage with a 20 page questionnaire and 75 questions. The ERC did not approve the study and returned the proposal advising the researchers to revise the questionnaire and to shorten the scope of research. Why do you think the ERC did not accept the proposal?

- A. Due to a long questionnaire ERC could not have enough time to review
- B. A long questionnaire at both of the stages, would exhaust the patients
- C. Risk of patients refusing to answer a long questionnaire and ERC role is to minimize risks
- D. There was a minimum benefit to patients, and ERC role is only to maximize benefits

Q2: A research group submitted the proposal to ethical review committee (ERC). The study involved asking about age and level of stress both using a closed question. The ERC did not approve the study and returned the proposal advising the researchers to revise the questionnaire, what can they do to get the ERC's approval?

- A. Rephrase both close-ended questions to open-ended questions
- B. Replace age question to open-ended question
- C. Rephrase stress question to open-ended question
- D. Resubmit their