How To Design a

Questionnaire

KSU COLLEGE OF MEDICINE 2019 - 2020

ACKNOWLEDGMENTS

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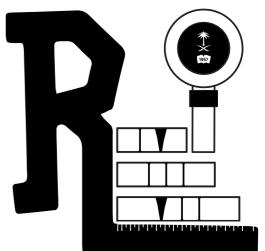
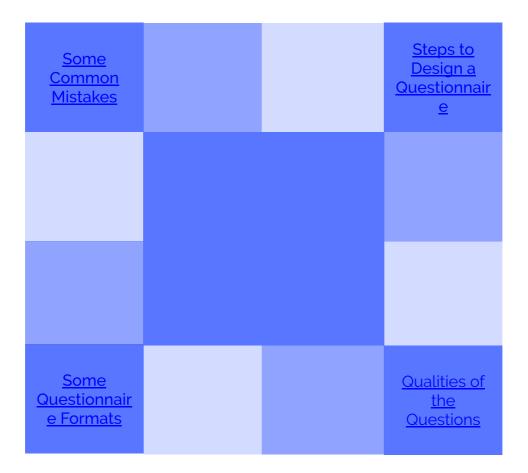


TABLE OF CONTENTS



LECTURE **OBJECTIVES**



There Are No Provided Objectives

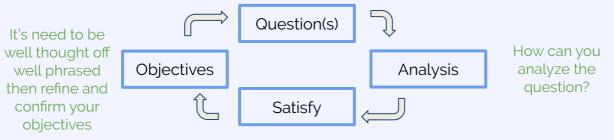
Steps to Design a Questionnaire

- 1. Write out the primary and secondary aims of your study. You must have a clear idea of where are you heading.
- 2. Write out concepts/information to be collected that relates to these aims.
- 3. Review the current literature to identify already validated questionnaires that measures your specific area of interest. Very important; To conform that what are you doing is validated, othentic and has not been done.
- 4. compose a draft of your questionnaire. Write down the questions then review it with an expert and colleagues
- 5. Revise the draft.
- 6. Assemble the final questionnaire.

1- Define the aims of the study:

- Write out <u>primary</u> and <u>secondary</u> aims using <u>one</u> sentence <u>per</u> aim. (Target population)
- Formulate a plan for the statistical analysis of each aim.

Does my question help me in achieving my objective?If not reform it



2- Define the variables to be collected:

- Detailed list of the information to be collected.
 - KAP.
 - Needs. It's similar case as KAP
 - Risk factors, behavior, diet, habit.
 - Demographics, associates. Essential. (i.e. Gender, age, out come of pregnancy).
 - Some combination of these concepts.
- Translate into variables that can be <u>measured</u>.
- Define the <u>role</u> of <u>each variable</u> in the <u>statistical analysis</u>:
 - Predictor (independent).
 - Outcome (dependent).
 - Confounder and/or effect modifier.

As a researcher in case of KAP there's no standard definitions, you need to formulate definitions according to you. It's rare to find ready-made definitions.

3- Review the literature:

- Review current literature to identify related surveys and data collection instruments that have measured aims similar to your aims.
- You may get:
 - Validated questionnaires. 0
 - saving your time. 0
 - Detailed items. 0
 - Comparison of results. 0

validated questionnaire give you the benefit of Comparison of results.

4- Compose the file draft:

- Determine the mode of survey administration:
 - Face-to-face interview. \cap
 - Self-administered survey (i.e. mail survey). 0
 - Telephone survey. 0
 - E-mail survey. 0

Why is this point important? We have a variety of populations and some modes work best with certain populations. (i.e. University teaches and E-mail survey). Same thing goes with language.

- Add more questions that then will be included in the final draft. •
- Place the most important items in the first half of the questionnaire. The most important questions at the start and sensitive questions at the end.
- Make sure questions flow naturally from one to another. This is a very common mistake.
- At the top of the questionnaire:
 - Introduce yourself briefly. And informed consent. 0
 - The purpose of the study. 0
 - How will the data be used. 0
 - Instructions on how to fill out the questionnaire and how long will it 0 take to fill it.
 - your policy on confidentiality. Ο
- Include identifying data on each page of multipage, paper page questionnaires. Such as respondent ID number in case the pages separate. **Optional**

All these factors will increase your response rate. What response rate is acceptable? 80-85%

5- Revise:

- Shorten the set of questions, If a question does not address one of the aimes. discard.
- Refine the questions including their wording by testing them with a variety of respondents: The more revise the more better it will be
 - Ensure the flow is natural. 0
 - Verify that terms and concepts are familiar and easy to 0 understand for your target audience.
 - Keep recall to minimum and focus on the recent past. 0

6- Assemble the final questionnaire:

- Group Questions concerning major subject areas together and introduce • them by heading or short descriptive statement.
- lisl questions in order to stimulate recall.
- Order and format questions to ensure unbiased and balanced results.
- Place the most important items in the first half of the questionnaire.
- Make sure questions flow naturally from one to another.

Testing the Survey instrument:

Include:

- Focus groups discussions.
- Cognitive interviews.
- field pre-testing. Do not include you pre-testing in your final results, but as similar as your population. 10% of the actual sample size.
 - Small-scale study in which all the conditions of the full scale-survey 0 are simulated.
 - survey modes. 0
 - interviewer oral debriefing and written reports. 0

Field pre-test warning signs:

- Variations (Skewed distributions).
- Response rate.
- 'No opinion' or 'Don't know' rates.
- Response patterns
- Flow of the questionnaire.

The population of the pre-test should be similar to your actual population of the study and do not include it in your results of the study.



1

How many cups of coffee or tea do you drink in a day?

Remember your objectives in the solution.

- What does this question call? It is a double barreled question.
- Principle: Ask for an answer in only one dimension.
- Solution: Separate the question into two.
 - How many cups of coffee do you drink during a usual day? 0
 - How many cups of tea do you drink during a usual day? 0

2

What brand of computer do you own?

- IBM PC. А.
- B. Apple.

If you don't do your literature search you might fall in this mistake.

- Principle: Avoid hidden assumptions. Make sure to accommodate all possible answers.
- Solution:
 - 0 Make each response a separate dichotomous item.
 - a. do you own an IBM PC? Yes or no. (circle)
 - b. Do you own an Apple computer? Yes or no. (circle)
 - Add all possible response categories and allow for multiple 0 responses.

You put on the most commonly used and others then leave a blank.

What brand of computer do you own? (Do not own computer, IBM PC, Apple, Othe with specifying). (circle)

3

 \bigcirc

Have you had pain in the last week?

Never Seldom Often Very often

Very good example of analysis

- Principle: Make sure question and answer options match.
- Solution: Reword either question or answer to match. How often have you had pain in the last week?
- Never O Seldom O Often O Very often

4

Survey given to teenagers. Where did you grow up as a child?

- Country.
- Farm.
- City
- Principle: Avoid guestions having non-mutually exclusive answers. •
- Solution: Design the question with mutually exclusive options (they do not overlap each other).

Where did you grow up as a child?

- House in the countryside.
- Farm house in the countryside.
- Large city neighborhood.
- Small town semi urban/rural.
- Other with specifying.

5

Which one of the following do you think increases a person's chance of having a heart attack the most?

- Smoking.
- Being overweight.
- stress.

All of them are correct and the response is one of them only. so it's wrong.

- Principle: Encourage the respondent to consider each possible response to • avoid the uncertainty of whether a missing item may represent either an answer that does not apply or an overlooked item.
- Solution: • Which of the following increases the chance of having a heart attack?
- Smoking: YES, NO, DON'T KNOW.
- Being overweight: YES, NO, DON'T KNOW.
- Stress: YES, NO, DON'T KNOW,

6

Are you against drug abuse? Yes or no. (circle)

Forcing views in the responses.

- Principle: Write questions that will produce variability in the responses.
- Solution: Eliminate the question.

PAGE 08

- 7
- Do you currently have a life insurance policy? Yes or No. (circle) 1.
- If no, How much is your annual life insurance premium? 2.
- Principle: Avoid branching as much as possible to avoid confusing • respondent.
- Solution: If possible, write as one question. How much did you spend last year for life insurance? (Write 0 if none).

Qualities of the Questions

- The number of questions should be determined in relevance to the proposed 1. objectives.
- Avoid irrelevant questions. 2.
- 3. The questions must be simple, short, inquire about one thing at a time.
- 4. Avoid sensitive and very personal questions, however, if the topic is of such a nature, leave them to the end.
- 5. Avoid leading questions.
- 6. Arrange questions in an orderly manner.
- 7. Questions relating to the same issue should be kept together.
- 8. Avoid technical terms.
- 9. Use local language of community.

Validity and Reliability



Some Common Mistakes

Main Mistakes (Q1)

- Personal information, such as income, should always be kept until the end of the 1. interview.
- Use of pre-coded income categories. 2.
 - 1. less than 4000
 - 2. 4000 7999
 - 3.8000-13999
 - 4. 14000 or above
 - 77. Refused
 - 99. Don't know

Categorical Variable (Ordinal)

For continuous variables like age, height, weight, etc. avoid using pre-coded options!

Main Mistakes (Q2)

Use simple, clear language.

"fitness and recreation opportunities", or "sports and fitness activities"

- 1. Yes
- 2. No
- 77. Refused
- 99. Don't know



Categorical Variable (Nominal)

Main Mistakes (Q3)

Avoid asking "aided awareness" questions. 1.

2. Keep questions short.

Q3. Have you recently seen, read, or heard anything about fitness and recreation programs in your community?

- 1. Yes
- 2. No
- 77. Refused
- 99. Don't know

Some Common Mistakes

Main Mistakes (Q4)

Don't ask two different questions and give one response category, Divide into two questions.

- Are you currently a member of a gym or fitness club?
- 1. Yes •
- 2. No
- 77. Refused
- 99. Don't know

Categorical Variable (Nominal)

- Do you participate in any regular physical fitness program?
- 1. Yes •
- 2. No
- 77. Refused
- 99. Don't know

Main Mistakes (Q5)

Use skip pattern if necessary.

Q.4 Are you currently a member of a gym or fitness club?

- 1. Yes
- 2. No
- 77. Refused
- 99. Don't know

Q.5 Please tell me what regular physical activity you participate in.

Open-Ended Question

Go to Question 6

Some Common Mistakes

Main Mistakes (Q6)

- 1. Keep related questions together.
- 2. Don't use abbreviations (PSA - public service announcement).

Q.6 Where did you read, see, or hear this information?

- 1. Radio
- 2. TV
- 3. Weekly Newspaper
- 4. Daily Newspaper
- 77. Refused
- 99. Don't know

- Categorical Variable (Nominal)

Main Mistakes (Q7)

1. Don't ask two different questions and give one response category.

2. Use the same format for the whole questionnaire.

Q.7 How would you rate the quality of the PSA(s) that you saw or heard?

- 1. Excellent •
- 2. Good
- 3. Fair
- 4. Poor
- 5. Terrible
- 77. Refused
- 99. Don't know



Categorical Variable (Ordinal)

Main Mistakes (Q8)

1. Use simple, common language.

2. Record the "action" in a more objective, direct manner.

Q.7 Would you say that after seeing the advertisement in the media you started participating in local physical activity programs more frequently than before?

- 1. Yes
- 2. No
- 77. Refused
- 99. Don't know

Close-Ended Question

Some Common Mistakes

Main Mistakes (Q9)

- Don't use leading questions 1.
- Keep related questions together 2.
- What do you recall about the information that you read, saw, or heard?

Open-Ended Question

Main Mistakes (Q10)

- 1. The introduction tells that the information they give is confidential. Asking for personal information after ensuring confidentiality needs to be explained clearly, and the respondent reassured that their name will not be associated with their responses.
- 2. The best way to do so is to state why you are asking, and then give them the option to provide the information, otherwise it can lead to some hostility.

Some Questionnaire Formats

#	Question	Coding	Answer
1)	What is your age?	1. 15-16 2. 17-18 3. 19-20 4. >21	
2)	Marital status?	 Single Married Engaged Separated Widowed Others 	
3)	Which country do you come from?	 Saudi Arabia Egypt Syria India Others 	
4)	Which city do you come from?	 Riyadh Jeddah Dammam Eastern region Others 	

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PROBLEM BEHAVIOR QUESTIONNAIRE

		Respondent Information		
Student Teacher	DOB	Grade School	Sex: M F	IEP: Y N
Telephone		Date		

STUDENT BEHAVIOR: Please briefly describe the problem behavior(s)

		PERCENT OF THE TIME							
		Never	10%	25%	50%	75%	90%	Alway	
1.	Does the problem behavior occur and persist when you make a request to perform a task?	0	1	2	3	4	5	6	
2.	When the problem behavior occurs do you redirect the student to get back to task or follow rules?	0	1	2	3	4	5	6	
3.	During a conflict with peers, if the student engages in the problem behavior do peers leave the student alone?	0	1	2	3	4	5	6	
4.	When the problem behavior occurs do peers verbally respond or laugh at the student?	0	1	2	3	4	5	6	
5.	Is the problem behavior more likely to occur following a conflict outside the classroom? (e.g., bus write up)	0	1	2	3	4	5	6	
6.	Does the problem behavior occur to get your attention when you are working with other students?	0	1	2	3	4	5	6	
7.	Does the problem behavior occur in the presence of specific peers?	0	1	2	3	4	5	6	
8.	Is the problem behavior more likely to continue to occur throughout the day following an earlier episode?	0	1	2	3	4	5	6	
9.	Does the problem behavior occur during specific academic activities?	0	1	2	3	4	5	6	
10.	Does the problem behavior stop when peers stop interacting with the student?	0	1	2	3	4	5	6	
11.	Does the behavior stop when peers are attending to other students?	0	1	2	3	4	5	6	
12.	If the student engages in the problem behavior do you provide one-on-one instruction to get student back on- task?	0	1	2	3	4	5	6	
13.	Will the student stop doing the problem behavior if you stop making requests or end an academic activity?	0	1	2	3	4	5	6	
14.	If the student engages in the problem behavior, do peers stop interacting with the student?	0	1	2	3	4	5	6	
15.	Is the problem behavior more likely to occur following unscheduled events or disruptions in classroom routines?	0	1	2	3	4	5	6	

Source: Lewis, Scott, and Sugai (1997)