



# Questionnaire Design



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# Steps to design a questionnaire



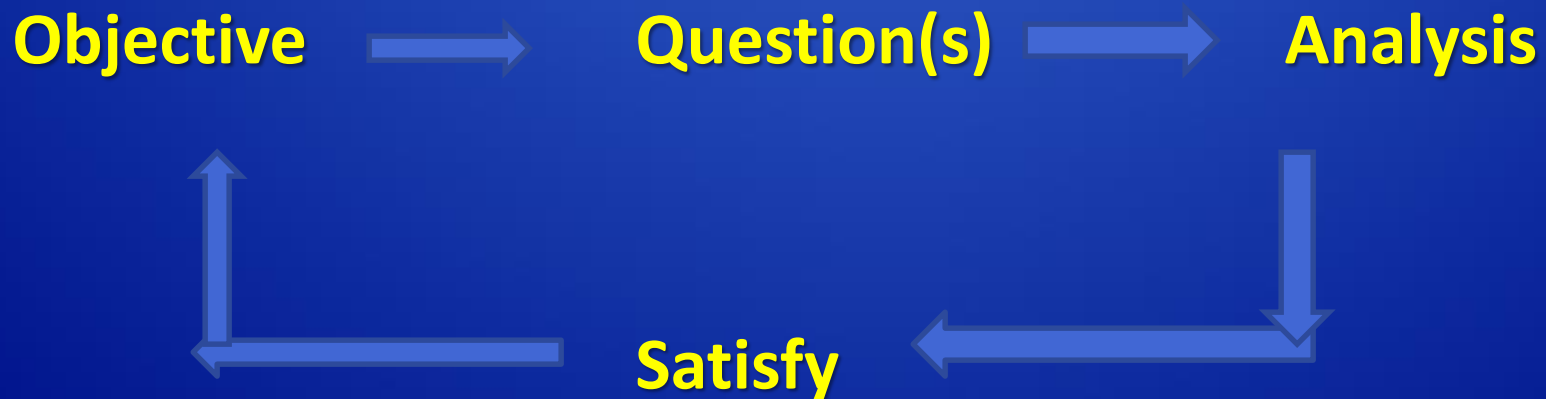
- 1. Write out the primary and secondary aims of your study.**
- 2. Write out concepts/information to be collected that relates to these aims.**
- 3. Review the current literature to identify already validated questionnaires that measure your specific area of interest.**
- 4. Compose a draft of your questionnaire.**
- 5. Revise the draft.**
- 6. Assemble the final questionnaire.**

# Define the aims of the study

**VERY IMPORTANT**



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



## 2: Define the variables to be collected



- Detailed list of the information to be collected .
  - KAP
  - Needs
  - Risk factors, behavior, diet, habit
  - Demographics , associates
  - Some combination of these concepts
- **Translate into variables that can be measured.**
- Define the role of each variable in the statistical analysis:
  - Predictor (independent)
  - Outcome (dependent)
  - Confounder and/or effect modifier.

# 3: Review the literature



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

# 4: Compose the first draft.



- **Determine the mode of survey administration:**
  - Face-to-face interview.
  - Self-administered survey (i.e. mail survey).
  - Telephone survey.
  - E mail survey.
- Add more questions than will be included in the final draft.
- Longer questionnaires reduce the response rate.
- Place the most important items in the first half of the questionnaire.
- Make sure questions flow naturally from one to another.



- At the top, of questionnaire clearly state:
  - Introduce your self briefly
  - The purpose of the study
  - How the data will be used
  - Instructions on how to fill out the questionnaire & how long will it take to fill it in
  - Your policy on confidentiality
- Include identifying data on each page of a multi-page, paper-based questionnaire such as a respondent ID number in case the pages separate

# Assemble the final questionnaire



- Group questions concerning major subject areas together and introduce them by heading or short descriptive statements.
- Order 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.



# 5: Revise



- Shorten the set of questions. If a question does not address one of the aims, discard.
- Refine the questions included their wording by testing them with a variety of respondents.
  - Ensure the flow is natural.
  - Verify that terms and concepts are familiar and easy to understand for your target audience.
  - Keep recall to a minimum and focus on the recent past.

# Testing the Survey Instruments



1. Focus groups discussions
2. Cognitive interviews
3. Field pre-testing

# Field Pre-test



- Small-scale study in which all the conditions of the full scale-survey are simulated
- Survey modes
- Interviewer oral debriefing and written reports

## **Warning signs:**

- Variation (Skewed distributions).
- Response rate .
- “No opinion” and “Don’t know” rates.
- Response Patterns.
- Flow of the questionnaire.

# Construct a question



Question:

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

# Answer key [1]:



- Question: How many cups of coffee or tea do you drink in a day?.....double barrel question
- **Principle:** Ask for an answer in only one dimension.
- **Solution:** Separate the question into two –
  - (1) How many cups of coffee do you drink during a usual day?
  - (2) How many cups of tea do you drink during a usual day?

# Construct a Question



- **Question:**
  
- **What brand of computer do you own?**
  - **(A) IBM PC**
  - **(B) Apple**

# Answer key [2]:



- Question: What brand of computer do you own?
  - (A) IBM PC
  - (B) Apple
- **Principle:** Avoid hidden assumptions. Make sure to accommodate all possible answers.
- **Solution #s 1 and 2:**
  - (1) Make each response a separate dichotomous item
    - Do you own an IBM PC? (Circle: Yes or No)
    - Do you own an Apple computer? (Circle: Yes or No)
  - (2) Add all possible response categories & allow for multiple responses
    - What brand of computer do you own? (Circle all that apply)
      - Do not own computer
      - IBM PC
      - Apple
      - Other (please specify) \_\_\_\_\_

# Answer key [3]:



- Question: Have you had pain in the last week?  
 Never  Seldom  Often  Very often
- **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  Seldom  Often  Very Often



# Construct a question



Survey given to teenagers

- Question: Where did you grow up as a child ?
  - Country
  - Farm
  - City

# Answer key [4]: (Assume asking a teenager/adolescence)



- Question: Where did you grow up as a child ?
  - Country
  - Farm
  - City
- **Principle:** Avoid questions having non-mutually exclusive answers.
- **Solution:** Design the question with mutually exclusive options (meaning 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 (please specify) \_\_\_\_\_

# Construct a question



Question:

- Are you against drug abuse? (Circle: Yes or No)

Yes

No

# Answer key [5]:



- Question: Are you against drug abuse? (Circle: Yes or No)
- **Principle:** Write questions that will produce variability in the responses.
- **Solution:** Eliminate the question.

# Answer key [6]:



- **Question:** Which one of the following do you think increases a person's chance of having a heart attack the most? (Check one.)  
 Smoking       Being overweight       Stress
- **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
  - .....

# Answer key [7]:



## ■ **Question:**

- (1) Do you currently have a life insurance policy?  
(Circle: Yes or No)
- If no, go to question 3.
- (2) How much is your annual life insurance premium?

## ■ **Principle:** Avoid branching as much as possible to avoid confusing respondents.

## ■ **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:



1. **The number of questions should be determined in relevance to the proposed objectives.**
2. **Avoid irrelevant questions.**
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



**Reliable  
Not Valid**



**Low Validity  
Low Reliability**



**Not Reliable  
Not Valid**



**Both Reliable  
and Valid**





- **Some common mistakes**

# Main Mistakes (Q1)



1. Personal information, such as income, should always be kept until the end of the interview

2. Use of pre-coded income categories

- 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.  
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

# 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 -----> Go to Question 6
- 77. Refused
- 99. Don't know

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

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Open-Ended  
Question

# Main Mistakes (Q6)



Keep related questions together

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)



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



Use simple, common language

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

Closed-Ended  
Question

# Main Mistakes (Q9)



Don't use leading questions  
Keep related questions together

- What do you recall about the information that you read, saw, or heard?

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Open-Ended  
Question

# Main Mistakes (Q10)



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.

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)	<i>What is your age?</i>	1. 15-16 2. 17-18 3. 19-20 4. >21	
2)	<i>Marital status?</i>	1. Single 2. Married 3. Engaged 4. Separated 5. Widowed 6. Others	
3)	<i>Which country do you come from ?</i>	1. Saudi Arabia 2. Egypt 3. Syria 4. India 5. Others	
4)	<i>Which city do you come from?</i>	1. Riyadh 2. Jeddah 3. Dammam 4. Eastern region 5. Others	

# INVESTOR PROFILE QUESTIONNAIRE

For expedited processing, please fax completed form to Saratoga at 623.266.4566.



Broker Name:

Firm:

Phone:  Date:

Client Name:

1. What is the approximate value of your total investment assets including CDs, bank accounts, mutual funds and other securities?
2. Of your total investment assets above, what dollar amount is currently available for investment?
3. If you are filling this questionnaire out for an IRA or other retirement plan, please indicate what type:  
 Traditional    Rollover    Both    Simple    SEP

Please answer the following 7 questions with regard to only the assets currently available for investment:

1. In how many years do you expect to need access to your funds? For example, if you are using the funds toward your retirement, in how many years do you plan to retire?  
 1 to less than 3 years  
 3 to less than 5 years  
 5 years or more
2. Do you wish to receive current income (interest plus dividends) of more than 3% per year from your portfolio?  
 Yes    No
3. Please describe your attitude toward the investment of this portfolio by circling the most appropriate number below. The higher the number indicated, the more aggressive you consider yourself to be.  

1	2	3	4	5	6	7	8	9	
More Conservative									More Aggressive

4. Please select the most accurate description of your primary investment objective for this portfolio.  
 A. *Income*: primary objective is current income with an emphasis on safety of principle.  
 B. *Income with Growth*: primary objective is current income with some growth of capital.  
 C. *Growth and Income*: primary objective is balanced between current income and growth of capital.  
 D. *Growth*: primary objective is growth of capital with some current income.  
 E. *Maximum Growth*: primary objective is growth of capital without regard to current income.
5. Please select the **hypothetical** portfolio with the five-year investment performance that best reflects your preference for your portfolio.

	Year	1	2	3	4	5	5 Yr. Avg.
<input type="checkbox"/> A.		+3%	+11%	+8%	-1%	+9%	+6%
<input type="checkbox"/> B.		-3%	+19%	+16%	-5%	+13%	+8%
<input type="checkbox"/> C.		-12%	+24%	+27%	-8%	+19%	+10%

*Your level of comfort with various investment returns is important. Historically, the more volatile the portfolio (a greater range of potential returns), the higher the average return has been. Of course, there is no assurance that this will remain true in the future. Therefore, you must balance your investment goals with your tolerance for risk and ability to accept and sustain a loss. Please remember that the table shown above is a hypothetical illustration of various potential annual returns. It does not represent in any way the past or future performance of any investment program or portfolio.*

6. If our evaluation suggests that investments in equity sectors such as Health & Biotechnology, Technology & Communications, Financial Services and Energy & Basic Materials are suitable for your portfolio, do you wish to have a portion of your assets invested in these markets?  
 Yes    No
7. For your fixed income investments, please indicate below whether you wish to primarily use taxable or federally non-taxable (municipal) securities. If you prefer instead to invest primarily in equity portfolios, leave the Taxable and Federally Non-taxable boxes blank and select the Primarily Equities Only box below.  
 Taxable    Federally Non-taxable  
 Primarily Equities Only

Client Signature:   
(if client is present)

# PROBLEM BEHAVIOR QUESTIONNAIRE



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

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

DIRECTIONS: Keeping in mind a typical episode of the problem behavior, circle the frequency at which each of the following statements are true.							
	PERCENT OF THE TIME						
	Never	10%	25%	50%	75%	90%	Always
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)



# Reference book & page number for the lecture resource

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# Other References



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Thank you

Questions?