

Questionnaire design

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Objective

At the completion to this lesson you will be able to:

1. Describe the steps in questionnaire design.
2. Write questions to address a specific research objectives.
3. Explain the difference between a desk check and piloting the survey.

Scenario

- You have observed an increase in cattle abortions in your region.
- You collected samples and 6 of the 18 were positive for brucellosis.
- You are planning a cross-sectional study to:
 - Determine the prevalence of brucellosis
 - Identify potential risk factors
- To collect risk factor information you will use a questionnaire.

Introduction

The steps in questionnaire design are:

1. Define the problem
2. Plan how the survey will be administered.
3. Write the questionnaire.
4. Desk check
5. Pilot survey

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Define the problem

Defining the problem means answering:

- What is the purpose of the survey?
- Who is the target population?
 - i.e. Who would we want to ask if we could ask everyone?
- What is the information going to be used for?
- What exactly do you want to find out?

Define the problem

Let's answer these question for Brucellosis scenario:

- What is the purpose of the survey?
 - Determine how prevalent brucellosis is
 - Identify risk factors (i.e. factors that increase or decrease the risk of brucellosis).

Define the problem

Let's answer these question for Brucellosis scenario:

- What is the purpose of the survey?
 - Determine how prevalent brucellosis is
 - Identify risk factors
- Who is the target population?
 - Cattle in the region of interest (you need to define the region clearly)
 - Consider if you would focus on all cattle or cattle in certain types of production systems

Define the problem

Let's answer these question for Brucellosis scenario:

- What is the purpose of the survey?
 - Determine how prevalent brucellosis is
 - Identify risk factors
- Who is the target population?
 - Cattle in the region of interest (you need to define the region clearly)
- What is the information going to be used for?
 - This was not specified and you would want to be clear before you start.
 - Possible uses for the information:
 - Use prevalent information to determine if the problem is 'large' enough to require attention
 - Plan a control program

Define the problem

Let's answer these question for Brucellosis scenario:

- What is the purpose of the survey?
 - Determine how prevalent brucellosis is
 - Identify risk factors
- Who is the target population?
 - Cattle in the region of interest (you need to define the region clearly)
- What is the information going to be used for?
 - This was not specified and you would want to be clear before you start.
- What exactly do you want to find out?
 - Here is were you get specific about the risk factors
 - It can be tempting to list everything but that makes for a long survey which may impact on participation and quality of answer

How many factors should you include?

No magic answer we are balancing:

Keeping it simple and brief to ensure people engage

AND

Maximise your efforts and collect as much data as possible because the effort and cost of collecting other data is typically small and less than another separate study

Questionnaire used in Doll & Hill landmark study on smoking in 1950's

Are you a smoker?

Note.—For the purpose of this inquiry a person is deemed to be a smoker if he has ever smoked as much as one cigarette per day for as long as one year

Section 1: PRESENT SMOKERS

- (a) I began smoking regularly when aged _____
- (b) At the present time my consumption of tobacco is about
- _____ cigarettes a day
_____ ounces of tobacco a week in home-made cigarettes
_____ ounces of tobacco a week in a pipe
- (c) My age last birthday was _____

OR

Section 2: EX-SMOKERS

- (a) I began smoking regularly when aged _____
- When I last gave up I was aged _____
- (b) My consumption of tobacco at the time I last gave up smoking was about:
- _____ cigarettes a day
_____ ounces of tobacco a week in home-made cigarettes
_____ ounces of tobacco a week in a pipe
- (c) My age last birthday was _____

OR

Section 3: NON-SMOKERS

- (a) Please tick the appropriate statement

I have never smoked at all
I have had an occasional smoke

- (b) My age last birthday was _____ ²¹

Smoking Survey Questionnaire

Please answer each of the following items as they apply to you. Answer as honestly as you can. Thank you so much.

Screen

- Do you have somebody currently smoke cigarettes (smoke every day for 6 months) in your family?
[1] Yes [2] No → exit

The person is male or female?

- [1] male [2] female → exit

- Is he married?

- [1] Yes [2] No → exit

Interview Questions

- Your name _____

- Your age ("✓" one box)

- [1] < 30 years
[2] 30–39 years
[3] 40–49 years
[4] 50 and over years

- What is your highest level of education? ("✓" one answer)

- [1] Elementary school and lower
[2] Junior school
[3] High school
[4] College and over

- What is your occupation? ("✓" one box)

- [1] Management
[2] Science/teaching
[3] Enterprise clerk
[4] Commercial clerk
[5] Other (please specify)

- How much is your income in every month (RMB) in present?

- [1] Less than 1000
[2] 1000–1499
[3] 1500–1999
[4] 2000–2499
[5] 2500–2999
[6] 3000–3499
[7] 3500–3999
[8] 4000–4499
[9] 4500–4999
[10] 5000–4999
[11] 6000–6999
[12] 7000–7999
[13] 8000 or more

- How long have you smoked regularly?

- [1] Less than 2 years
[2] 2–3 years
[3] 3–4 years
[4] 4–5 years
[5] 5 or more years

- On average, how many cigarettes per day do you currently smoke?

- [1] Less than 10 cigarettes
[2] 10–19 cigarettes
[3] 20 or more cigarettes

- Age you started smoking?

- [1] Under 20 years
[2] 20–29 years
[3] 30 years and older

- Have you ever made an attempt to stop smoking?

- [1] Yes (Continue)
[2] No (Skip to Question 18)

- How many times have you ever tried to stop smoking?

- [1] 1 time
[2] 2 times
[3] 3 times
[4] 4 times
[5] 5 times
[6] 6 times and over

- On your most recent quit attempt, how long were you able to stop smoking? ("✓" one answer)

- [1] < 1 week
[2] 1–2 weeks
[3] 2–3 weeks
[4] 3 weeks – 1 month
[5] 1–2 months
[6] 2–3 months
[7] 3–4 months
[8] 4–5 months
[9] 5–6 months
[10] 6 or more months

- Your reasons for trying to stop smoking? ("✓" more than one answer)

- [1] Family pressure
[2] Health concern (for self and family members)
[3] Advice and example from others
[4] Cost
[5] Restrictions on smoking in workplace, on public transportation, at home
[6] Social stigma
[7] Other (please specify)

- Method most often used to quit smoking?

- [1] Will power
[2] Behavior approach (stay away from smokers, distract, drink tea and so on)
[3] Medical measures (like nicotine replacement, Chinese traditional medicine)
[4] Family help
[5] Commercial cessation products
[6] Other (please specify)

14. In the above which method do you think was the most effective? _____

15. Most influential trigger to smoke when you tried to quit smoking? ("✓" one answer)

- [1] In social situations (e.g., in the company of other smokers, etc)
- [2] When feeling stressed
- [3] When feeling negative, or down
- [4] When feeling positive, or elated
- [5] During entertainment (playing cards for money, playing Majiang, watching sport, etc)
- [6] While reading or writing
- [7] When alone
- [8] In the presence of alcohol
- [9] After a meal
- [10] When feeling tired
- [11] Other (please specify)

16. The most influential situation that caused your relapse? ("✓" one answer)

- [1] In social situations (e.g., in the company of other smokers, etc)
- [2] When feeling stressed
- [3] When feeling negative, or down
- [4] When feeling positive, or elated
- [5] During entertainment (playing cards for money, playing Majiang, watching sport, etc)
- [6] While reading or writing
- [7] When alone
- [8] In the presence of alcohol
- [9] After a meal
- [10] When feeling tired
- [11] Other (please specify)

17. Which one most caused your relapse?

- [1] Low self- control
- [2] The influence of other smokers
- [3] A lack of available cessation methods
- [4] Little family support
- [5] Other (please specify)

18. Do you want to quit smoking?

- [1] Don't want to quit
- [2] Want to attempt to quit smoking
- [3] Strong desire to quit smoking

19. If you try to quit smoking, how would you describe your self-confidence in successfully quitting smoking?

("✓" one answer)

- [1] Will be successful
- [2] May be successful
- [3] May succeed or fail
- [4] Likely to fail

Home address: _____

Home telephone number: _____

Interviewer: _____

Date: _____

Subject signature: _____

Checker: _____

Date: _____

Define the problem

To identify risk factors you can:

- Read textbooks or a review article
- Consult experts
- Read journal papers

For this activity we will focus on three possible risk factors:

- Where resources are shared between neighbours
- Age of the animal
- Mating

Plan your administration method

- How will you get the questionnaire filled out



Plan you administration method

- Online survey tools
 - Even if you go into the field to collect data you can still enter into an online tool (which will help with analysis)

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<http://www.surveygizmo.com>



<http://www.surveymonkey.com>

Write the questions

When starting out I recommend focusing on the following:

- Use language the person answer the questions will understand
- Be specific
- Only 1 idea per question
- Avoid bias language

Write the questions

Answer formats

- Open questions

- Advantages

- Not limited to the researchers knowledge or understanding

- Disadvantages

- Difficult to code
 - Can turn respondents off

- Closed questions

- Try and include all the alternatives and include an other
 - Be clear as to whether people are selecting one or all that apply

Activity

- Part 1: 20 minutes
 - Working in your groups draft the questions you include in a cross-sectional survey to determine potential risk factors for brucellosis:
 - Whether neighbours share equipment
 - The age of the animals you are testing for brucellosis
 - Method of mating, including the source of the bull or semen
 - Don't forget to decide on the answer format
- Part 2: 15 minutes
 - A tutor will join your group for 5 to 10 minutes to discuss your progress
 - After discussion finalise your questions and prepare to present back to the group.
- Part 3: 30 minutes
 - Each group will present their questions (2 minutes per group)
 - Other groups will provide feedback on the questions (2 minutes per group)
 - Tutor will provide feedback (1 minute per group)

Now you have some questions what next?

- You need to format the questionnaire so the questions flow logically
- Now desk check the questions yourself and with others in your group
- Pilot the survey with people who are part of your target population