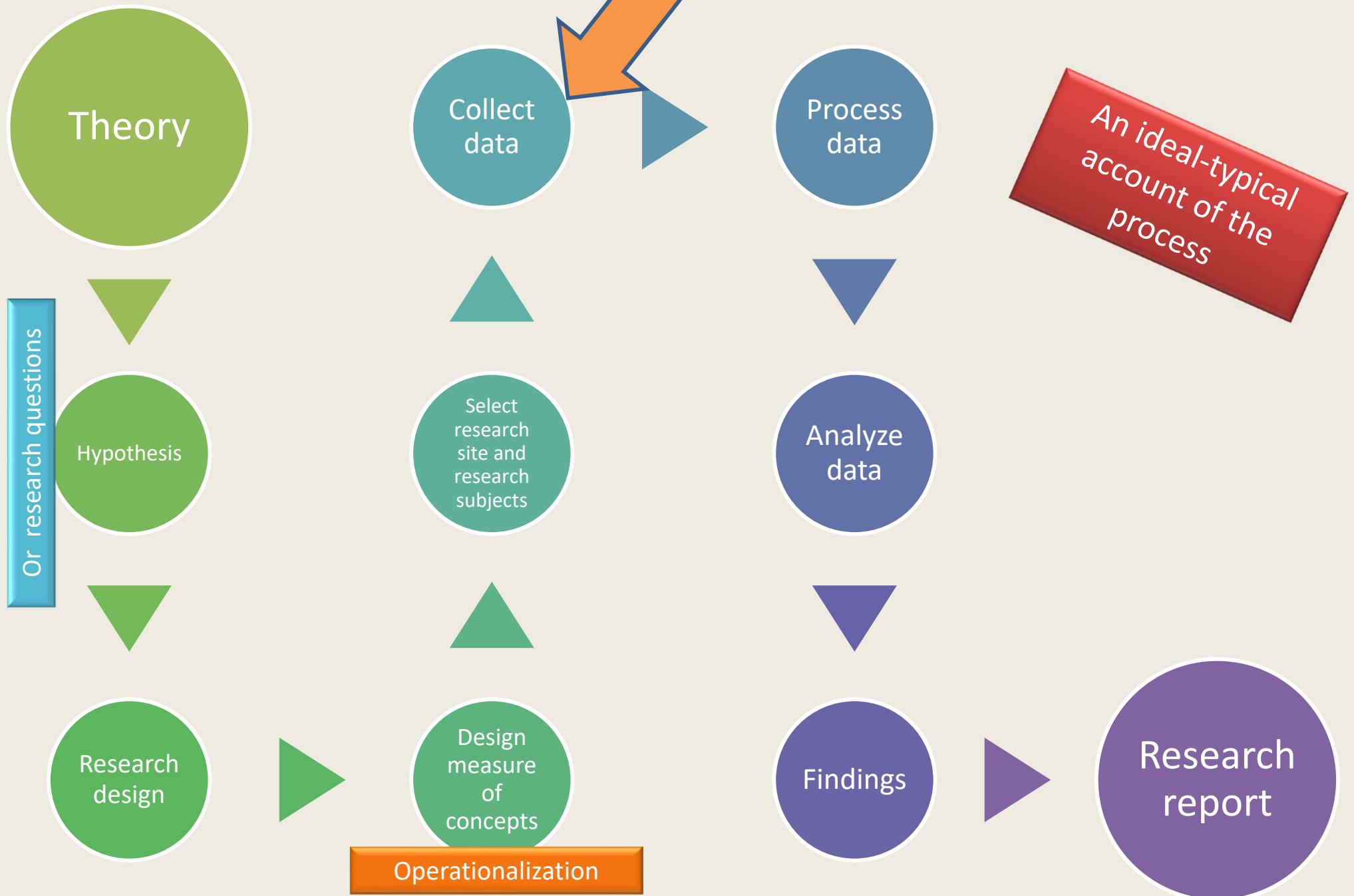


Quantitative research process



Methods of collecting data

Questionnaire

Self-completion questionnaire

Self-administered questionnaire

Forms

Postal
E-mail
Web-based
Supervised

Advantages

- Easy to administer
- Cheaper than other methods
- Convenient for respondents
- Absence of interviewer effects
- No interviewer variability

Disadvantages

- No help from researchers
- No probing in open questions
- Unanswered questions
- Response set bias
- Questionnaire can be read as whole
- Not appropriate for some kinds of respondents
- Not knowing who answers
- Lower response rates comparing to interviews

Classification of response rate (Mangione, 1995)

Over 85%	excellent
70-85%	very good
60-69%	acceptable
50-59%	barely acceptable
Below 50%	not acceptable

Types of Questions

Closed-ended questions:

A question where participants must select their answers from a set of predetermined response categories.

What do you usually do when you feel anxious?

- Eat
- Exercise
- Talk to a friend
- Cry
- Binge-watching

Open-ended questions:

A question that allow participants to respond in their own words.

What do you usually do when you feel anxious? (Please describe)

Before analysis, the responses must be coded and categorized.

Mixed-question format:

Includes a mixture of both closed- ended and open-ended response characteristics in a single item.

What do you do most often when you feel anxious?

- Eat
- Exercise
- Talk to a friend
- Cry
- Netflix binge-watching
- Other (Please specify)_____

Checklists:

Participants asked to check all response categories that apply.

What were your feelings during the pandemic-19 lockdown period?

- Happiness
- Stress
- Fear
- Anger
- Despair
- Confusion
- Relaxation
- Sadness
- Comfort

Binary forced-choice approach:

Participants must select from two response choices provided with an item.

Example:

In each of the following pairs of attributes, please choose the one that you most agree with.

- I am an extroverted person
- I am an introverted person

- I like being around people
- I enjoy being alone

Forced-choice approach in

rating questions: Participants must select from the response choices provided with an item. A forced choice scale doesn't account for neutral or in-between opinions.

Example:

How important is this feature to you?

- Very important
- Important
- Moderately Important
- Slightly Important
- Unimportant

Rating scales: An ordered set of response choices, measuring the direction and strength of an attitude

Likert Scale (1932): The most frequently used multi-item approach to scaling.

TABLE 12.6

The Rosenberg Self-Esteem Scale

Circle one response for each of the following items.

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I feel that I am a person of worth, at least on an equal basis with others.	1	2	3	4
2. I feel that I have a number of good qualities.	1	2	3	4
*3. All in all, I am inclined to feel that I am a failure.	1	2	3	4
4. I am able to do things as well as most other people.	1	2	3	4
*5. I feel I do not have much to be proud of.	1	2	3	4
6. I take a positive attitude toward myself.	1	2	3	4
7. On the whole, I am satisfied with myself.	1	2	3	4
*8. I wish I could have more respect for myself.	1	2	3	4
*9. I certainly feel useless at times.	1	2	3	4
*10. At times I think I am no good at all.	1	2	3	4

*Items marked with an asterisk have reverse wording. Scores for the reverse wording items must be reversed before summing with responses to the other items. For the reverse wording items, convert a response of 1 to 4; convert 2 to 3; convert 3 to 2; and convert 4 to 1. After conversion, sum the 10 responses and divide the sum by 10 for each participant.

Source: Morris Rosenberg's "Self-Esteem Scale" from pp. 325–327 of *Society and Adolescent Self Image*, 1989.

Likert scales may be using 4-, 5-, 6-, 7-point rating

The score for each participant's responses is computed by summing up the points.

Christensen, Johnson, Turner (2015). *Research Methods, Design and Analysis*, p. 353. Pearson.

EXHIBIT 12.1

Examples of Response Categories for Popular Rating Scales

Approval scale

1	2	3	4	5
Strongly disapprove	Disapprove	Neutral	Approve	Strongly approve

Satisfaction scale

1	2	3	4	5
Very dissatisfied	Somewhat dissatisfied	Neutral	Somewhat satisfied	Very satisfied

Amount Comparison scale

1	2	3	4	5
Much less	A little less	About the same	A little more	Much more

Similarity scale

1	2	3	4
Very much unlike me	Somewhat unlike me	Somewhat like me	Very much like me

Effectiveness scale

1	2	3	4
Not at all effective	Not very effective	Somewhat effective	Very effective

Performance scale

1	2	3	4
Excellent	Good	Fair	Poor

We have to pay attention to this middle point. Sometimes there is a confusion about the interpretation of middle stance, especially when the response “I don’t know/I can’t answer” is included in the scale.

Summated rating scales

Christensen, Johnson, Turner (2015). *Research Methods, Design and Analysis*, p. 349. Pearson.

Semantic differential (Osgood, Suci & Tannenbaum, 1957): A scaling technique that is used to measure the meaning that participants give to attitudinal objects or concepts and to produce semantic profiles.

Item	1	2	3	4	Item
Ugly					Beautiful
Worthless					Valuable
Unhappy					Happy
Offensive					Delightful
Shameful					Honorable
Impossible					Possible
Unhealthy					Healthy



anchors: Descriptions placed on points on a rating scale



Guttman Scale (1944): A scaling technique that is used to measure how much of positive or negative attitudes a person has towards a particular topic.

Item	Yes	No
Would you accept immigrants as residents in your country?	1	0
Would you accept immigrants as residents in your town?	1	0
Would you accept immigrants as residents in your neighborhood?	1	0
Would you accept immigrants as next-door neighbors?	1	0
Would you accept an immigrant as your child's spouse?	1	0

Agreement with any item implies agreement with all preceding items.

Bogardus Social Distance Scale (1924): Measures the social distance of communities towards immigrating communities.

Principles of questionnaire construction

1. *Write items to match the research objectives*
2. *Write items that are appropriate for the respondents to be surveyed*
3. *Write short, simple questions or sentences*
4. *Avoid loaded or leading questions*

A **loaded term** is a word that produces an emotionally charged reaction. The inclusion of a word can have a dramatic impact of participant responses. For example:

Some social groups take advantage of state benefits.

Some groups seem to over rely on state benefits.

A **leading question** suggests how the participants should answer.

For example:

Do you believe killing an innocent unborn baby should be a decision taken by individuals or the state's certified officials?

Individuals

State's certified officials

Don't know/no opinion

5. *Avoid double-barreled questions*

A ***double-barreled question*** is a question about two or more issues in a single item.

For example:

Do you agree that personal success is measured by personal and job satisfaction?

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

6. *Avoid double negatives*

A ***double negative question*** is a sentence that contains two negatives

For example:

Do you agree or disagree with the following statement?

Psychology professors should not be allowed to conduct research during their office hours.

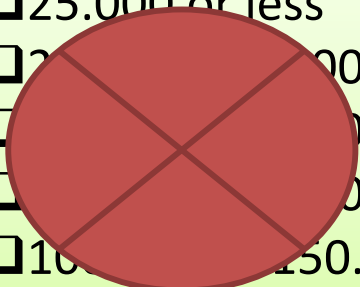
7. *Determine whether closed-ended and/or open-ended questions are needed.*

8. Construct mutually exclusive and exhaustive response categories for closed-ended questions

Mutually exclusive categories are nonoverlapping response categories.

For example:

Please check the box that includes your current annual income in dollars:

- | | |
|---|---|
| <input type="checkbox"/> 25.000 or less | <input type="checkbox"/> Less than 25.000 |
| <input type="checkbox"/> 25.000 to 49.999 | <input type="checkbox"/> 25.000 to 49.999 |
| <input type="checkbox"/> 50.000 to 74.999 | <input type="checkbox"/> 50.000 to 74.999 |
| <input type="checkbox"/> 75.000 to 99.999 | <input type="checkbox"/> 75.000 to 99.999 |
| <input type="checkbox"/> 100.000 to 149.999 | <input type="checkbox"/> 100.000 to 149.999 |
| <input type="checkbox"/> 150.000 or more | <input type="checkbox"/> 150.000 or more |
- 

Exhaustive categories include a place for all possible responses.

In the previous example we had chosen as a last category “150.000 or more” so to include all those who earn more than 150.000 per year.

9. Consider the different type of closed-ended response categories rating scales

Response categories may be ***dichotomous*** or ***multichotomous***.

For example:

Dichotomous response

Gender

Male

Female

I watch TV everyday

Yes

No

Multichotomous response

An ordered set of response choices, such as a 5-point rating scale (Likert or semantic difference scale)

10. Use multiple items to measure complex or abstract constructs

11. Make sure the questionnaire is easy to use from the beginning to the end

- *Put a title*
- *Number the questions*
- *Provide clear instructions*
- *Start the questionnaire with interesting, gentle questions*
- *Place demographic and other sensitive questions at the end of the document*
- *Do not use “fill-in” lines with open-ended questions; provide black space*
- *Do not “break” questions across pages*
- *Always end the questionnaire with a “Thank you for completing this questionnaire” or “Thank you for your participation”*

12. Pilot test the questionnaire until it is perfected

Pilot test: “Trying out” the instrument in order to identify problems.