

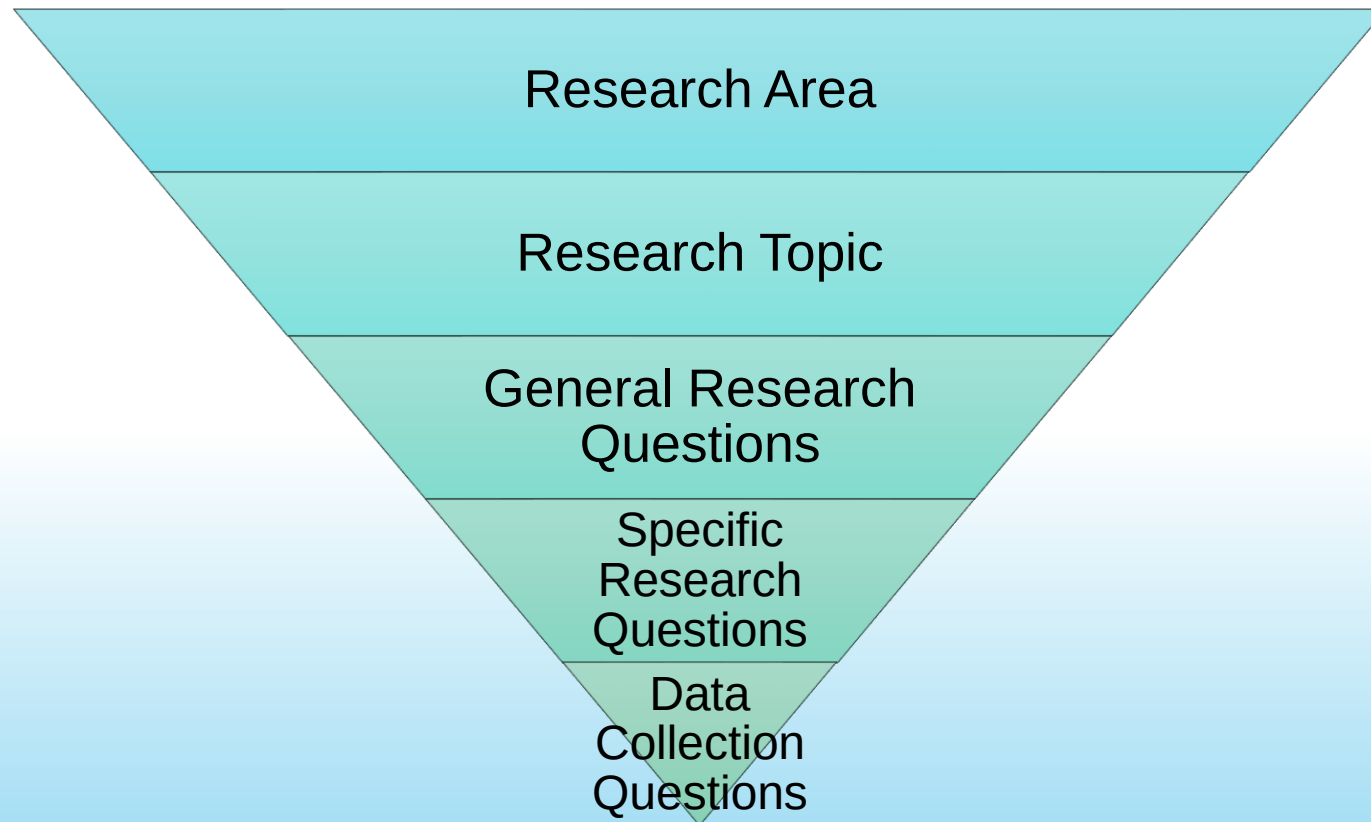


PLANNING RESEARCH

Research Questions and
Selecting Measures

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RESEARCH QUESTIONS



RESEARCH QUESTIONS



Questions **before** methods!

More important than ever in social science research

Quantitative and Qualitative methods sit alongside each other, or may be combined in one study



“How will I do my research?” “Can I use X method?”

This comes **AFTER** your **research questions**

Work out what you are trying to find out first



RESEARCH QUESTIONS

“A question well asked is a question half answered”

- A well developed and well stated research question indicates what data will be necessary to answer it.

RESEARCH QUESTIONS

- The problem being addressed should be able to be stated in the form of a **question**

What is the effect of on?

Is there a difference in between groups?

Can predict behaviour?

- A research question defines the area of interest (but is NOT a declarative statement – this would be a hypothesis)





**EXAMPLE:
SHOULD NURSES WEAR WHITE
UNIFORMS?**

This could become:

- Do **nurses** think they should wear white uniforms?
- Do **hospital administrative staff** think that nurses should wear white uniforms?
- Do **patients** think that nurses should wear white uniforms?

Each variation now clearly indicates who we need data from about their views of nurses wearing white uniforms

RESEARCH QUESTIONS



Research questions identify what you want to **understand**



For example,

Qualitative – interview questions

Quantitative – survey questions



These ‘tools’ provide the data you need to understand things/phenomena

RESEARCH QUESTIONS

The way your RQ's are formed should make it clear what method you will eventually use



*RQ's indicating experimental comparison, or intervention/ treatment, where clear outcome variables are defined clearly fits a **quantitative** methodology*



*RQ's that focus on interpretations, meanings and/or cultural significance of some behaviour clearly fits a **qualitative** methodology*

Most important thing is: methods should match questions, not the other way around!!

RESEARCH QUESTIONS

Is the proposed study **descriptive**, **explanatory**, or **both**?



WHAT questions...

What is the situation?

Collect, organise and summarise information

Quantitative:

Summarise specific factual information into empirical generalisations

Qualitative:

Summarise details of events, characteristics, cases or processes

RESEARCH QUESTIONS

Is the proposed study **descriptive**, **explanatory**, or **both**?



↓
WHY questions...

Why is this the case / situation?

Sets out to explain and account for descriptive information, and also sometimes concerned with testing, verifying or even generating theory

Aim is to find reasons for why things occur, or show how/why they are how or what they are

RESEARCH QUESTIONS

For *qualitative research*, there is one more thing to consider...

Interpretative questions



These types of questions ask about the **meaning** for the people involved

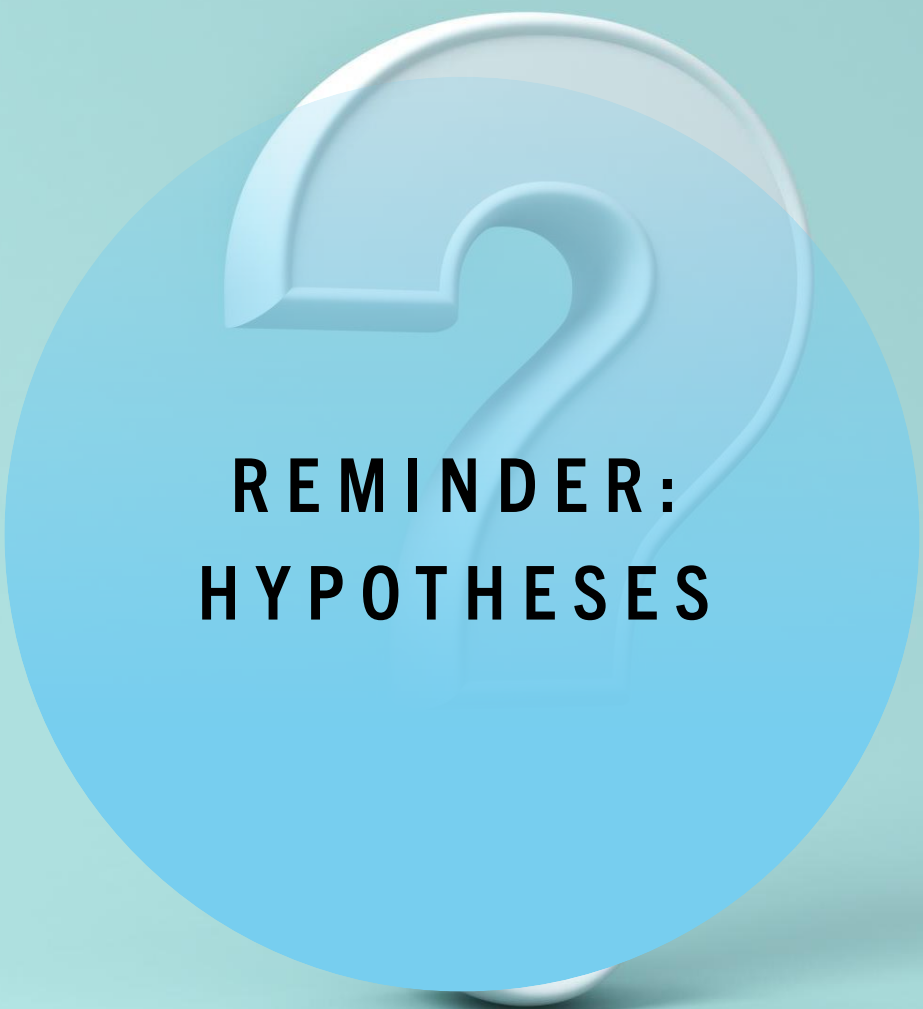
DO I NEED HYPOTHESES?

- Can you predict what you're likely to find?
 - *If yes, then hypotheses would be useful (and required)*
- Hypotheses for quantitative research only
 - *Qualitative = research questions*

REMINDER: HYPOTHESES

- A hypothesis is a precise, testable statement of what researchers predict will be the outcome of a study
- An '*if – then*' prediction: 'if the theory is true, then under these conditions, this will happen'

e.g., If it is true that children are more hyperactive when they eat chocolate, then if I give a group of children chocolate, they should become more hyperactive.



REMINDER: HYPOTHESES

- In research, the convention is that the hypothesis can take two forms:

The null hypothesis

- A statement of no relationship/effect amongst the variables
- ***This is often implicit – it is always a statement of no effect***
- We have to determine whether to reject the null hypothesis (i.e., our results DO show an effect) or fail to reject it (i.e., there is nothing being observed)

The alternative hypothesis (experimental hypothesis if an experiment is being conducted)

- A statement indicating that there will be a relationship / effect, etc between the variables being studied

REMINDER: HYPOTHESES

One-tailed / Directional

- A hypothesis that makes a prediction about the direction in which results are expected

e.g., males are more aggressive than females



Two-tailed / Non-directional

- A statement that something will be occurring, but no statement of the direction

e.g., there will be a difference in aggression scores between males and females



Pre-empirical stage

What data are
required to test
hypotheses?

Research
Area

Research
Questions

Design

Data
Analysis

Problem

Hypotheses

Data
Collection

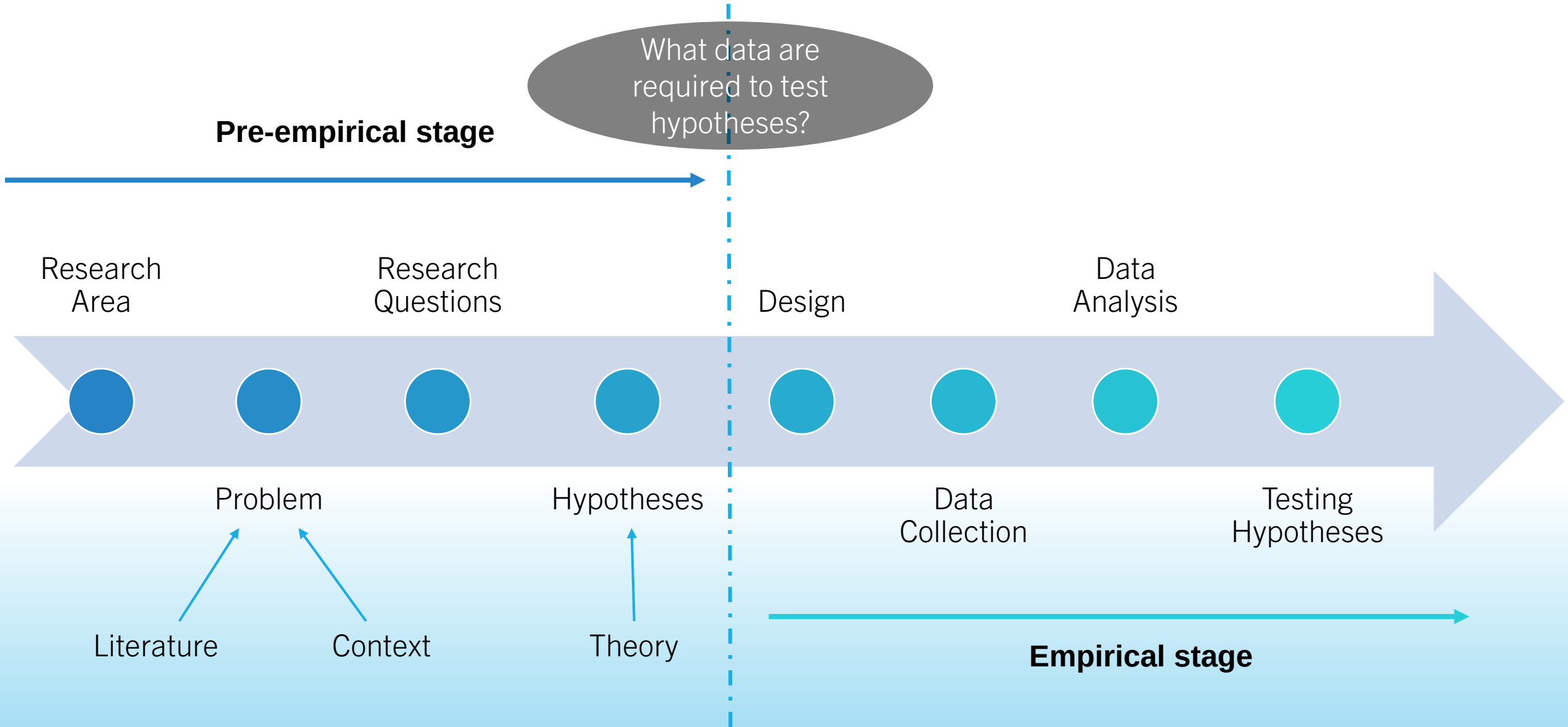
Testing
Hypotheses

Literature

Context

Theory

Empirical stage



**TO MEASURE OR
NOT TO
MEASURE?**

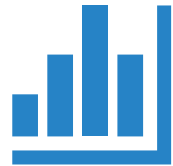
Research questions ✓

Hypotheses (if needed) ✓

Method chosen ✓

Now... how will data be collected?

HOW WILL DATA BE COLLECTED?



Quantitative

Counting

Scaling

Measuring



Qualitative

Asking (interviewing)

Watching (observing)

Reading (documenting)

QUANTITATIVE MEASURES

Does the proposed research require an **existing measure**, or do measures / instruments need to be **created** to collect data?

Existing

Consideration of history of use and psychometric properties

New

Consideration of steps involved in constructing a new measure and the pre-testing that will be involved

An existing, validated and robust psychological scale is always better to use than creating something new, but this depends on the **topic area**

UNDERSTANDING QUANTITATIVE DATA

Continuous data is generally stronger – more scope for analysis

Can categorise continuous data if needed

Less options for analysis if collecting only categorical data

You can turn continuous data into categorical data but not vice versa!

Reminder: Two broad types of data

Categorical

- *E.g., gender, personality type, groupings*
- *Limited number of groups to which people can belong / can only to one group*

Continuous

- *E.g., age, scores on a scale, seconds taken to complete a task*
- *Can take a vast range of values often from zero to an infinite number*

QUALITATIVE MEASURES

More difficult to summarise, but the same considerations apply as with quantitative

Existing

Consideration of background and previous use

New

Consideration of steps involved in developing new qualitative measure

It is more likely that a qualitative researcher will develop instruments rather than use those developed by others

QUESTIONS?

