

WRAP Exams · wrapexams.com

Prelims PYQ, Mains model answers, and copy evaluation. Write to the desk for this paper, a doubt, or the AI waitlist.

ask@wrapexams.com · +91 85951 84903 · wrapexams.com

Q1(c)

What are variables? Discuss their role in experimental research.

UPSC Civil Services Mains 2015 · Sociology GS 1 · 10 marks · Research Methods and Analysis

Research Methods and Analysis: Qualitative and quantitative methods; Techniques of data collection; Variables, sampling, hypothesis, reliability and validity.

Core demand of the question

- What are variables? Discuss their role in experimental research
- Keep the discussion within a 10-mark length

Revision summary

A variable is a property with more than one value.

Experiments isolate an independent condition and measure a dependent outcome, with controls.

Durkheim and **Merton** already thought in relations among variables.

Weber and Mead limit a stimulus-response reading of persons.

Most sociology uses quasi-experiments and surveys, not a closed lab.

Introduction

A variable is a property that takes more than one value across cases, such as income, caste category, or years of schooling. In experimental research, variables are named so that a cause can be isolated from a background.

Body**What a variable is**

- Independent variables are the conditions the researcher varies or selects. Dependent variables are the outcomes to be explained.
- Control variables hold rival causes constant. Intervening variables sit on the path between cause and effect.
- **Emile Durkheim** already treated integration as a variable that moved suicide rates, even without a laboratory.

Role in experiments

- Random assignment, after R. A. Fisher's logic, aims to make groups comparable so the treatment is the **independent variable**.
- Manipulation and measurement convert a theory into an operational test. Reliability of the measure matters as much as the design.
- Robert K. **Merton**'s middle-range hypotheses are typically statements linking two or more variables.

Sociological caution

- **Max Weber** warned that meaning is not a simple stimulus. George Herbert Mead's self is not a lever.
- Field and quasi-experiments, and survey experiments, are more common than a closed lab on society.
- **Census** and **NFHS** supply measured variables, not a full experimental isolation of cause.

Flow diagram

Independent variable -> Dependent variable

Controls -> Dependent variable

Experiment random assignment -> Independent variable

Conclusion

Variables name changing properties so that experimental and quasi-experimental work can test a relation. They are tools of isolation. They do not erase meaning, power, or history in social life.

Facts & figures

Independent variable

The condition treated as cause; in true experiments it is assigned at random.

Durkheim

Used variation in integration and regulation to explain variation in suicide rates.

Merton

Middle-range theory is typically a hypothesised link among a few variables.

NFHS

Measures many social variables at household scale without experimental assignment.