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Q2(c)

What do you mean by reliability? Discuss the importance of reliability in social science research.

UPSC Civil Services Mains 2025 · Sociology GS 1 · 10 marks · Sociology as Science

Sociology as Science: Science, scientific method and critique; Major theoretical strands of research methodology; Positivism and its critique; Fact value and objectivity; Non-positivist methodologies.

Core demand of the question

- Define reliability as consistency of measurement
- Distinguish it from validity
- Show why it matters in social science research, with types such as test-retest and inter-rater
- Give a brief research illustration

Revision summary

Reliability is the consistency of a measure across time, items and raters.

It differs from validity, which asks whether the right concept is being measured.

Types include test-retest, split-half or alpha, and inter-coder agreement.

Durkheimian rates and modern surveys both depend on stable classification.

Qualitative work still needs transparent, repeatable coding.

Without reliability, comparison, replication and policy use of data collapse.

Introduction

Reliability means that a research instrument yields consistent results when the same thing is measured again under comparable conditions. If a scale of religiosity, a census occupation code, or two interviewers' classifications jump about without a real change in the world, the finding is noise. In social science this matters because our objects-attitudes, class, stigma-are already slippery. Unreliable measures cannot support comparison, theory or policy.

Body**What reliability is, and is not**

A reliable measure is stable and internally coherent. Classic types are **test-retest** consistency over time, **split-half** or Cronbach's alpha for items on a scale, and **inter-rater** or inter-coder agreement when observers classify open material. Reliability is about the instrument and the procedure, not yet about whether we are measuring the right concept. That second question is **validity**. A clock that is always ten minutes fast is reliable and invalid. A one-item question on "are you modern?" may be unreliable and invalid at once.

Emile Durkheim's suicide rates already depended on the reliability of official classification. If coroners in one district hide suicides as accidents, the social fact is distorted. Survey research on caste discrimination, domestic violence or vote intention faces the same problem of

consistent wording, consistent probing and consistent coding. In qualitative work, reliability is sometimes recast as auditability and transparent coding rather than a coefficient, but the underlying demand for trustworthiness remains.

Importance follows directly. Without reliability, replication fails, trends cannot be read, and hypotheses cannot be fairly tested. Policy uses of NFHS or crime statistics inherit every coding inconsistency. Reliability is therefore not a statistical luxury. It is a condition for treating sociological statements as evidence rather than as one more opinion.

Flow diagram

Instrument -> Reliability consistency
Reliability consistency -> Test-retest
Reliability consistency -> Inter-rater
Reliability consistency -> Internal coherence
Reliability consistency -> Validity needs reliability
Validity needs reliability -> Right concept

Conclusion

Reliability is consistency of measurement across time, items and observers. It is necessary for valid inference but not the same as validity. Social research needs it because official categories and attitude scales are otherwise too unstable to explain society.

Facts & figures

Test-retest

Repeating the same instrument to see whether scores remain stable when the phenomenon has not changed.

Inter-rater reliability

Agreement between different observers or coders using the same rules.

Reliability versus validity

Consistency is necessary but not sufficient; a biased but stable measure is reliable and invalid.