

# Study Sheet

Chapter 2, Psychology 2e

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## Section 1: Concept Checklist

Check off each concept once you can explain it in your own words.

- Why scientific research matters (vs. intuition/opinion)
- Scientific knowledge as empirical
- Facts vs. opinions in research
- Notable researchers (Washburn, Calkins, Sumner, Prosser, Piñero, Boaz, Sen Gupta)
- Deductive vs. inductive reasoning
- Theory vs. hypothesis
- Falsifiability of scientific hypotheses
- The circular scientific process (theory → hypothesis → data → theory)
- Clinical/case studies: strengths and weaknesses
- Naturalistic observation: strengths and weaknesses
- Observer bias and inter-rater reliability
- Structured observation (e.g., Ainsworth's Strange Situation)
- Surveys: strengths and weaknesses
- Population, sample, and generalizability
- Measures of central tendency (mode, median, mean)
- Archival research: strengths and weaknesses
- Longitudinal vs. cross-sectional research
- Attrition in longitudinal studies
- Correlation and correlation coefficient ( $r$ )
- Positive vs. negative correlation
- Correlation does not imply causation
- Confounding variables
- Illusory correlations and confirmation bias
- Experimental vs. control groups
- Independent vs. dependent variables
- Operational definitions
- Random sampling and random assignment
- Single-blind vs. double-blind studies
- Experimenter bias and placebo effect
- Statistical analysis and statistical significance
- Peer-reviewed journal articles and replication
- Reliability vs. validity (types of each)
- Institutional Review Board (IRB) and informed consent
- Debriefing and deception in research
- Institutional Animal Care and Use Committee (IACUC)
- Tuskegee Syphilis Study and research ethics history

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### Section 2: Fill in the Blank

Each blank is a vocabulary word from the chapter's Key Terms list. A word bank is provided on the next page.

1. \_\_\_\_\_ is grounded in objective, tangible evidence that can be observed time and time again, regardless of who is observing.
2. A \_\_\_\_\_ is a well-developed set of ideas that proposes an explanation for observed phenomena.
3. A \_\_\_\_\_ is a testable prediction about how the world will behave if an idea is correct, often worded as an if-then statement.
4. A scientific hypothesis must be \_\_\_\_\_, or capable of being shown to be incorrect.
5. In \_\_\_\_\_ reasoning, ideas are tested against the real world starting from a general premise.
6. In \_\_\_\_\_ reasoning, conclusions are drawn from observations.
7. A \_\_\_\_\_ focuses on one or a few individuals and provides great depth of information.
8. \_\_\_\_\_ is the observation of behavior in its natural setting.
9. \_\_\_\_\_ occurs when an observer's expectations skew their recording of behavior.
10. \_\_\_\_\_ is a measure of agreement among observers on how they record and classify a particular event.
11. A \_\_\_\_\_ is a list of questions answered by research participants, allowing data collection from large numbers of people.
12. The \_\_\_\_\_ is the overall group of individuals that researchers are interested in studying.
13. A \_\_\_\_\_ is a subset of individuals selected from the larger population.
14. \_\_\_\_\_ research uses past records or data sets to answer various research questions.
15. \_\_\_\_\_ research studies the same group of individuals repeatedly over an extended period of time.
16. \_\_\_\_\_ research compares multiple segments of a population at a single time.
17. \_\_\_\_\_ refers to the reduction in the number of research participants as some drop out over time.
18. \_\_\_\_\_ means there is a relationship between two or more variables, but this does not necessarily imply cause and effect.
19. A \_\_\_\_\_ is a number from -1 to +1 indicating the strength and direction of the relationship between variables.
20. A \_\_\_\_\_ means the variables move in the same direction.
21. A \_\_\_\_\_ means the variables move in opposite directions.
22. A \_\_\_\_\_ is an unanticipated outside factor that affects both variables of interest.
23. \_\_\_\_\_ occur when people believe that relationships exist between two things when no such relationship exists.
24. \_\_\_\_\_ is the tendency to ignore evidence that disproves ideas or beliefs.
25. The \_\_\_\_\_ gets the experimental manipulation, while the \_\_\_\_\_ does not.
26. The \_\_\_\_\_ is manipulated by the experimenter; the \_\_\_\_\_ is what the researcher measures.
27. An \_\_\_\_\_ is a precise description of how variables will be measured or manipulated.
28. In a \_\_\_\_\_, every member of the population has an equal chance of being selected.
29. \_\_\_\_\_ ensures all participants have an equal chance of being placed in either group.
30. \_\_\_\_\_ refers to researcher expectations skewing the results of the study.
31. The \_\_\_\_\_ occurs when people's expectations or beliefs influence their experience in a given situation.

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32. In a \_\_\_\_\_, both researchers and participants are blind to group assignments.
33. A \_\_\_\_\_ is an article reviewed by other scientists with expertise in the subject before publication.
34. To \_\_\_\_\_ a study means to repeat it using different samples to determine reliability.
35. \_\_\_\_\_ refers to the consistency and reproducibility of a given result.
36. \_\_\_\_\_ refers to the accuracy of a given result in measuring what it is designed to measure.
37. The \_\_\_\_\_ is a committee that reviews proposals for research involving human participants.
38. \_\_\_\_\_ is the process of informing participants about the experiment and obtaining their consent to participate.
39. \_\_\_\_\_ involves purposely misleading participants to maintain the integrity of the experiment.
40. \_\_\_\_\_ provides participants with complete, honest information about the experiment upon its conclusion.
41. The \_\_\_\_\_ reviews proposals for research involving non-human animals.
42. A \_\_\_\_\_ is a personal judgment, conclusion, or attitude that may or may not be accurate.
43. A \_\_\_\_\_ is an objective and verifiable observation established through empirical research.

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## Word Bank (Alphabetized)

Possible answers for Section 2. Each term is used once (some terms fill two blanks).

- archival research
- attrition
- cause-and-effect relationship
- clinical or case study
- confirmation bias
- confounding variable
- control group
- correlation
- correlation coefficient
- cross-sectional research
- debriefing
- deception
- deductive reasoning
- dependent variable
- double-blind study
- empirical
- experimental group
- experimenter bias
- fact
- falsifiable
- generalize
- hypothesis
- illusory correlation
- independent variable
- inductive reasoning
- informed consent
- Institutional Animal Care and Use Committee (IACUC)
- Institutional Review Board (IRB)
- inter-rater reliability
- longitudinal research
- naturalistic observation
- negative correlation
- observer bias
- operational definition
- opinion
- participants
- peer-reviewed journal article
- placebo effect

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- population
- positive correlation
- random assignment
- random sample
- reliability
- replicate
- sample
- single-blind study
- statistical analysis
- survey
- theory
- validity

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## Answer Key

1. empirical
2. theory
3. hypothesis
4. falsifiable
5. deductive reasoning
6. inductive reasoning
7. clinical or case study
8. naturalistic observation
9. observer bias
10. inter-rater reliability
11. survey
12. population
13. sample
14. archival research
15. longitudinal research
16. cross-sectional research
17. attrition
18. correlation
19. correlation coefficient
20. positive correlation
21. negative correlation
22. confounding variable
23. illusory correlation
24. confirmation bias
25. experimental group / control group
26. independent variable / dependent variable
27. operational definition
28. random sample
29. random assignment
30. experimenter bias
31. placebo effect
32. double-blind study
33. peer-reviewed journal article
34. replicate
35. reliability
36. validity
37. Institutional Review Board (IRB)
38. informed consent
39. deception

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- 40. debriefing
- 41. Institutional Animal Care and Use Committee (IACUC)
- 42. opinion
- 43. fact