

WHAT IS THE RESEARCH CYCLE?

SPINAL RESEARCH INSTITUTE | CONSUMER ENGAGEMENT PROGRAM



The **research cycle** is a process researchers follow to undertake scientific inquiry and produce new knowledge. Researchers must go through several stages to achieve their research objectives. The research cycle is an iterative process, meaning that the researcher may need to repeat some stages or refine the research problem or methodology based on the results obtained. Nevertheless, the research cycle is critical for generating new knowledge and advancing scientific inquiry.

Problem identification The first step in the research cycle involves identifying a research problem or a knowledge gap that needs to be addressed. The problem must be clear and well-defined to guide the research process.

Literature review Once the research problem is identified, the next step is to conduct a literature review to understand what has already been researched and what gaps exist in the existing body of knowledge.

Hypothesis formulation Based on the research problem and the literature review, the researcher formulates a hypothesis, which is a statement that proposes an explanation for the problem being studied.

Research design The research design outlines the methodology and procedures that the researcher will use to collect and analyze data. The design should address the research problem and provide reliable, valid results.

Ethics approval The research ethics review process is a systematic and critical evaluation of research proposals by a review board to ensure that the research follows ethical principles and safeguards participants' rights and welfare.

Data collection In this stage, the researcher collects data using various methods such as clinical trials, surveys, experiments, interviews, or observations.

Data analysis After collecting data, the researcher must analyse it to draw conclusions and test the hypothesis. This process involves using statistical or other analytical tools to identify patterns, relationships, or outcomes.

Results The researcher concludes and presents the results in a report or publication based on the data analysis.

Conclusion The conclusion summarises the research findings and evaluates the hypothesis's validity.

Translation Research findings may result in changes to healthcare policy or practice, or the approval of a drug or medical device. The researcher may also identify areas for future research and suggest possible directions for further inquiry.

Spinal Research Institute: thesri.org

Antonio Vecchio, Community & Consumer Engagement Manager: antonio.vecchio@thesri.org

The Consumer Engagement Program is supported by the SRI's major partner, the IOOF Foundation. Resources are developed with the support of the John T Reid Charitable Trusts, The Marian and E.H. Flack Trust and the Brian M. Davis Charitable Foundation.