



Overview on research process

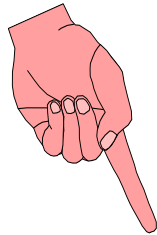
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Research Process

- *Phase one: The conceptual phase.*
- *Phase two: The design and planning phase.*
- *Phase three: The empirical phase.*
- *Phase four: The analytic phase.*
- *Phase five: The dissemination phase.*

Phase one: **The conceptual phase**

- **Includes:**



**Thinking, reading, rethinking, theorizing,
and reviewing ideas with colleagues or
advisors.**





Phase one: **The conceptual phase**

- **Step one: Stating a research problem.**
- **Step two: Defining the research purpose.**
- **Step three: Reviewing related literature.**
- **Step four: Formulating hypothesis and defining variables.**

Step one: Stating a research problem.

Moving from a ***broad area of interest*** to a more ***specific problem*** that tells exactly what will be studied.

Examples of research questions:

"What are the most common types of high-risk pregnancies in X city?"

"What are the risk factors for postoperative pulmonary complications after total abdominal hysterectomy?"

"What is the relationship between the nurses' job satisfaction and their tendency to leave work?"



Step two: Defining the research purpose.

This is called the *aim of the study*.

It explains the following:

- *Why the question is important?*
- *How the answer of this question will serve? (or being utilized?).*

E.g.,

“The purpose of the study is to explore the most common types of high-risk pregnancies in X city in order to direct more attention to their prevention, early detection, and prompt treatment. This would ultimately reduce both maternal and newborns morbidity and mortality.”



Step three: Reviewing related literature.

To build on, confirm, and/or contradict the existing knowledge in a field, researcher must know what has already been done.

Literature review provides the researcher with:

- *Ideas for defining concepts.***
- *Means for formulating operational definitions.***
- *Relevant theories.***
- *Related facts, issues, and researches.***
- *Prior findings.***
- *Instruments for measurements.***



Step four: Formulating hypothesis and defining variables

That is writing statements about an expected relationship between the study variables.

Some researches **develop hypothesis**, while others **test hypothesis** (experimental).

Stating hypothesis requires:

- Sufficient knowledge on the topic to make prediction about the outcomes.***
- Development of operational definition for study variables.***
- Explicit statement.***

Step four: Formulating hypothesis and defining variables (Cont.)

It could be a hypothesis or a null hypothesis:

- **Hypothesis (H):** tests the idea that there is a relationship between variables.

For example, "Mothers who are given analgesics during labor give birth to babies with low apgar score".

- **Null hypothesis (H_0):** Tests the idea that there is no significant difference in dependent variable other than what can be attributed to chance.

For example, "Analgesia in labor does not influence the neonates apgar scoring".





Phase two: **The design and planning phase:**

- ***Step five: Selecting the research design***
- ***Step six: Selecting population and sampling.***
- ***Step seven: Developing data collection tools.***
- ***Step eight: Conducting a pilot study.***

Step five: Selecting the research design

- **Systematic and controlled plan for finding answers to the study question.**
- **It offers a map for *organizing the sample* through *data analysis*.**



Step six: Selecting population and sampling.

Once the researcher has formulated his study question, reviewed his/her literatures and deciding on a plan for doing the study, he/she is now ready to choose the study population and sample.



Step seven: Developing data collection tools.

Tool selection and development depends on:

- *Research type.*
- *Nature of population and sample.*
- *Data collector's preparation.*
- *Time for data collection.*
- *Nature of data to be collected.*



Step eight: Conducting a pilot study.

Pilot Study: is a small scale practice of the study, through which the researcher can learn a lot about the strengths and weaknesses of the research plan as regards:

- ☞ ***The design.***
- ☞ ***The sample.***
- ☞ ***The data collection method.***
- ☞ ***The data collection tools.***
- ☞ ***The data collection technique.***
- ☞ ***The feasibility of the study.***
- ☞ ***Through the pilot study, the data collection tool is revised and modified.***



Phase three: **The empirical phase**

Step nine: Data collection.

Data is usually collected from: people, records, or laboratory materials.

Methods for data collection include:

- * *Observation.***
- * *Interview.***
- * *Questionnaire.***

Data collection instruments/tools include:

- * *Checklist.***
- * *Scales.***
- * *Interview guide.***
- * *Questionnaire sheet.***





Phase four: **The analytical phase**

- **Step ten: Data analysis.**
- **Step eleven: Interpreting and discussing the results.**
- **Step twelve: Writing a conclusion and recommendation.**

Step ten: Data analysis.

Includes taking the data that have been collected apart and reorganizing them again in relation to the study questions, objectives, and/or hypothesis.



Step eleven: Interpreting and discussing the results.

The study findings are *explained, discussed, and elaborated on in relation to previous findings* and what has been written about it in *the literature.*



Step twelve: Writing a conclusion and recommendation.

Finally, the main study results are organized in specific **conclusion** that **answers the study question and meets its objectives.**

This is followed by **recommendations** that are based on the study conclusion, suggesting **directions for future lines of research.**





Phase five: **The Dissemination phase**

- ***Step thirteen: Communicating conclusions.***
- ***Step fourteen: Utilizing the findings.***



Step thirteen: Communicating conclusions.

Through *writing* a detailed research report and *publishing* it in the relevant literature.





Step fourteen: Utilizing the findings

planning for *research utilization* in the real field, in order to improve the quality of provided care, conducted education, and research field.

Any

Questions

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