

Introduction to Research Methods in Home Science

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(A concise, easy-to-read guide for students and practitioners)

1. What Is Research in Home Science?

Aspect	Description
Definition	Systematic inquiry aimed at generating new knowledge or validating existing knowledge about household, family, and community life.
Purpose	• Improve nutrition, health, and well-being • Develop efficient household technologies • Inform policy on family welfare, consumer behavior, and sustainability
Scope	Nutrition, textiles, interior design, child development, consumer economics, family resource management, community development, etc.

2. The Research Process – Step-by-Step

1. Identify the Problem / Topic

- Observe daily life, review literature, or respond to a community need.
- Formulate a clear, focused research question (e.g., “How does meal planning affect family food waste?”).

2. Review the Literature

- Search scholarly journals, books, theses, and credible online sources.
- Summarize what is known, locate gaps, and justify your study.

3. Define Objectives & Hypotheses

- **Objectives** – specific, measurable aims (e.g., “To compare the cost-effectiveness of batch cooking vs. daily cooking”).
- **Hypotheses** – testable statements (e.g., “Batch cooking reduces weekly food waste by at least 20%”).

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4. Select a Research Design

- **Descriptive** – surveys, observations (what is happening).
- **Exploratory** – focus groups, case studies (why it is happening).
- **Experimental / Quasi?experimental** – interventions, control groups (how to change it).

5. Choose the Methodology

- **Quantitative** – structured questionnaires, scales, physiological measurements.
- **Qualitative** – interviews, diaries, photo?elicitation, ethnography.
- **Mixed?methods** – combine both for richer insight.

6. Determine Sampling Strategy

- **Population** – all households/families fitting the study criteria.
- **Sampling frame** – list from which participants are drawn (e.g., community registry).
- **Techniques** – simple random, stratified, purposive, snowball, cluster.
- **Sample size** – based on power analysis (quantitative) or saturation (qualitative).

7. Develop Data?Collection Instruments

- Questionnaires ? Likert scales, multiple?choice, open?ended items.
- Observation checklists ? kitchen layout, food?handling practices.
- Interview guides ? semi?structured prompts.
- Pilot test ? refine wording, timing, reliability.

8. Collect Data

- Obtain informed consent and ensure confidentiality.
- Follow ethical guidelines (see Section?9).
- Record data systematically (paper forms, mobile apps, audio recordings).

9. Analyze Data

- **Quantitative**: descriptive stats (means, frequencies), inferential tests (t?test, ANOVA, regression), software (SPSS, R, Excel).
- **Qualitative**: thematic coding, content analysis, software (NVivo, Atlas.ti).
- **Mixed**: integrate findings through triangulation.

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10. Interpret & Discuss Findings

Science

- Relate results to objectives and literature.
- Explain practical implications for households, industry, or policy.
- Acknowledge limitations and suggest future research directions.

11. **