

Assistance for your application for a thesis at the Chair of Nutritional Psychology

Below you find an overview with tips how to formulate good research questions and testable hypotheses.

What makes a good research question? (Karmasin & Ribing, 2017; Leedy & Ormrod, 2015; Peters & Dörfler, 2019a)

1. **Relevance:** Make sure that your research question is relevant to the research field and contributes to the existing literature.
2. **Clarity and precision:** Formulate your research question clearly and precisely to avoid misunderstandings and determine the focus of your research.
3. **Openness:** Formulate your research question as openly as possible to leave room for different perspectives and interpretations.
4. **Specificity:** Avoid asking research questions that are too broad or vague and focus on a specific problem or topic.
5. **Researchable/explorability:** Make sure that your research question is sufficiently researchable, and that enough data or resources are available to answer it.

How do I formulate suitable hypotheses? (Benesch & Steiner, 2023; Karmasin & Ribing, 2017; Peters & Dörfler, 2019a)

1. **Connection to the research question:** Your hypotheses should directly relate to your research question and concretise it.
2. **Empiricism:** Formulate hypotheses that are empirically testable and relate to observable phenomena or measurements.
3. **Operationalisation:** Describe the variables clearly and operationalise them so that they can be measured or observed. *Example:*
 - *You are writing about anorexia nervosa (AN)*
 - *The operationalisation of your variable AN could be such that you only include studies in your paper that have examined individuals with an AN diagnosis.*
 - *If you choose AN symptoms as your main variable, look for studies that have examined AN symptoms.*
4. **Testability:** Ensure that your hypotheses are testable by using appropriate methods and statistical analyses.
5. **Direction and specificity:** Formulate hypotheses with a clear direction (e.g. positive or negative) and as specific as possible to facilitate testing.
6. **Logical coherence:** Check whether your hypotheses are logically coherent and do not contain any obvious contradictions.
7. **Theoretical framework:** Ensure that your hypotheses are realistic and based on an appropriate theoretical foundation. Show how your research question fits with existing theories or offers new insights.
8. **Relevance:** Consider the practical relevance of your hypotheses and their potential contribution to the understanding of the phenomenon under investigation.

Other tips

- Title of your thesis \neq research question of your thesis.
- Formulate an H0 and H1 (pair of hypotheses); these must be semantically identical, except for the direction/specificity of the hypothesis (Benesch & Steiner, 2023).
- Assign your hypotheses to a sub-research question.
- Pay attention to the mathematical meaning of the terms ‘positive’ and ‘negative’ if you want to indicate the direction of your hypothesis, as this does not imply any (social) judgement (Schäfer, 2016). *Examples:*
 - o *Positive correlation = ‘The higher X, the higher Y.’*
 - o *Negative effect = ‘An increase in X leads to a decrease in Y.’*
- Do not use too many variables per hypothesis. We recommend a maximum of 4 variables.
- If you want to analyse more than 2 variables, these are often moderation and mediation hypotheses in nutritional psychology. Therefore, please inform yourself about moderation and mediation analyses. We recommend the textbook by Hayes & Little (2022) (available at the JLU Library).
- When phrasing your hypotheses, pay attention to your intended study design (cross-sectional design vs. longitudinal design, Benesch & Steiner, 2023):
 - o Terminology: correlation (cross-sectional, one measurement time point) vs. influence / effect
 - o If you say, ‘influence / effect of X on Y’, then you are testing for causality and you can only include studies with a more advanced methodology, e.g. RCTs or experiments. Generally, these study results are more powerful, but are less frequent than cross-sectional studies.
 - o If you say, ‘correlation between X and Y’, then you are testing a cross-sectional design, and you can generally include more studies.
 - o Base your decision on the scope and content of your research question and the available literature.
- Make sure you use non-stigmatising language, e.g. ‘people with obesity’ rather than ‘obese people’ (Person-First Language, Weissman et al., 2016). Im Medienleitfaden der Deutschen Adipositas Gesellschaft wird erklärt, wie man stigmatisierungsfreie Sprache nutzt (DAG & IFB, 2018, S. 12f.)
- Cite your three study proposals on your topic according to current guidelines, e.g. the American Psychological Association (2020) or Pfetsch (2019).
 - Renowned journals in the field of nutritional psychology are desirable (e.g. Appetite, Body Image, International Journal of Eating Disorders, etc.).
- We also recommend the detailed guidelines by Peters & Dörfler (2019a, 2019b) for writing theses in psychology and social sciences.

Taking these tips into account will help you define sound research questions and testable hypotheses that will provide a solid foundation for your thesis.

Best regards

Chair of Nutritional Psychology

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