Writing and Reviewing Methods Papers for JNEB

April 26, 2016
Questions can be typed in the chat pod at any time.
Article Types in

- Research Articles
- Research Briefs
- Research Methods
- Reports
- Systematic Reviews
- Perspectives
- GEMs
Basics that JNEB expects from ALL paper types.

- Background
- Rationale for study and hypothesis or objectives
- Sound methodology
- Results with impact for literature [not in methods]
- Discussion of results [different for Methods]
- Implications for Research and Practice [not in Methods]
Research Methods

Manuscripts that describe the objectives and methodologies for multi-year interventions whose aims are to change nutrition and/or physical activity behavior and/or related physiological outcomes, such as BMI or blood glucose.

Expected to have protocols that have already undergone review external to the author's institution (federal or national agencies) prior to funding.

Although Results are not included in Research Methods, a Discussion should include a brief summary of potential limitations and expected benefits or outcomes.

Research Methods are peer-reviewed by the Editors and a member of the Board of Editors for completeness, clarity, and contribution to the literature.
FAQ’s from Authors

Dr. Johnson will answer FAQs and more, next.
Building towards the goal: Implementation Science

*It takes an average of 17 years for only 14% of research to translate into practice*

- Implementation science models and frameworks focus on multiple levels (e.g., participant, community workers, organization) and contextual factors related to successful translation.

Also focuses on practical and generalizable interventions and measures that can be applied across diverse settings (and can potentially reach large segments of the population).

- Systematic study of strategies and factors associated with the successful integration of evidence-based interventions and policies into practice.
Key Points of Implementation Science

• Seeks to understand the **barriers and facilitators** that influence successful implementation of effective interventions.

• Enhances the extent to which intervention research is **generalizable, representative, and comprehensive** in order to increase public health impact.
  
  – *The details of intervention methods need to be available to assist in making interventions generalizable!*

• To address complex health issues, researchers need to work together and share their knowledge and expertise to **increase the number of evidence-based interventions that are implemented** in real-world settings.
Objectives of the intended research are clearly stated along with how the proposed research will advance the field

Clear hypotheses about the outcomes of the intervention

Hypotheses are linked to the Methods and Study Design chosen
Research Design

• Basic research design
  – Intervention or prevention
  – RCT
  – Cross-over
  – Quasi experimental (control and intervention groups)
  – Longitudinal
Sample Size Calculations

• Upon which variables/outcomes were sample sizes derived?

• Why were these chosen and are they critical for the intervention outcomes?

• If interim analysis will be conducted:
  – how will this be accounted for in the power analysis? (i.e. will an adaptive design be used?)
  – will final p values be adjusted to account for previous comparisons?

• What were the limitations in sample size calculations (can put this in the Discussion)?
Participants and Recruitment

- How is the sample or reference population defined?
- What is their source?
- What are the inclusion and exclusion criteria?
- What are the methods for recruitment?
- What are the informed consent procedures? Are there special details that relate to the sample to be recruited? Will a Data Safety Monitoring Board (DSMB) be required?
- Will screening or pre-screening be utilized?
- How will participants be allocated to treatment groups?
  - If randomized, what is the randomization scheme? Will the conditions be blinded? Double-blinded?
Intervention Details

• Will an existing intervention program be used and, if so, will it be tailored for this study?
  – Will usability testing be utilized to assure appropriateness for the target sample? (PDSA cycle?)

Question: what is our study design includes the development of the intervention?
Plan-Do-Study-Act Cycle

• Quality Improvement
• Often in clinical care
• Moving towards ideal operation or implementation
• Identifies what needs to be changed and attempts to implement that change

Intervention Details

• If an intervention is to be developed, what methods will be utilized to develop the contents?

• What materials will be used in the intervention?
  – What are core components and how do they relate to:
    1) the objectives of the study and the study outcomes?
    2) to underlying theoretical framework of the intervention?
  – Are they evidence-based?
Intervention Details

• What are the “active ingredients” of each core component?
  – That is, how are the core components operationalized?
  – Are these adequately described to be considered teachable, learnable and doable in the setting chosen?

• How will the intervention be delivered?
  – Setting, by whom, how often, intensity and duration

If we are developing our intervention, can we just leave this out? Or do we wait until we’ve completed the intervention development to submit a Methods paper?
Assessments

• What assessments will be collected?

How were the assessments chosen? (a table can be useful here with more description in the text)
  – Upon what criteria were the assessments evaluated and ultimately chosen?
    • psychometrics, appropriateness for the sample to be recruited, tailoring for the study at hand

• What covariates or confounders will be measured to adequately capture the effects of the intervention?
Process Analysis

• How will compliance be determined?
• How will loss to follow up be documented?
• What process evaluation will be conducted to determine the fidelity of intervention analysis?
  – Dose, delivery, across deliverers?

Sampling Frame

• When will assessments be conducted?
  – At what time points before, during and after will assessments be conducted? (A figure can be useful here)
Data Analysis

• Will an interim analysis be conducted? If so, what is the defined point at which this will be undertaken?
• Will stop criteria be pre-defined?
• What analysis will be undertaken to compare treatment groups?
  – Statistic, covariates or confounders, unit of analysis, planned comparisons
  – Intention-to-treat? Completers analysis?
• How will baseline effects be controlled for in comparisons?
Discussion

How will this study add to our existing knowledge?

- Will new methods developed during the intervention add to existing methodology in the field?
- Protocol strengths
- Acknowledged limitations and how those may be addressed in analyses

So the Methods paper has to include more than our research grant?
The Reviewer’s Lens

Chris Taylor
Telling the whole story

The Executable Methodology

Contribution to the Science

The 6-Page Grant Proposal Narrative
Isn’t My Grant Proposal Narrative Enough?

• Differing Purpose
  – Grant proposal: Enough detail to get funded
  – Methods paper: Enough detail to shape future science

• Differing length:
  – Grant proposal: Page limits restrict detail
  – Methods paper: Bulk of the manuscript is dedicated to identify need and how the design assesses the need.
    Gives a complete picture of the design.
http://www.ducksters.com/hobbies/lego.php
The Key Elements of the Paper

- Scientific Gap
- Research Objective
- Research Design
- Intervention
- Measurement/Assessment of Outcomes
Research Methods

Research Methods are manuscripts that describe the objectives and methodologies for multi-year interventions whose aims are to change nutrition and/or physical activity behavior and/or related physiological outcomes, such as BMI or blood glucose. Research Methods are expected to have protocols that have already undergone review external to the author's institution (federal or national agencies) prior to funding. Although Results are not included in Research Methods, a Discussion should include a brief summary of potential limitations and expected benefits or outcomes. Research Methods are peer-reviewed by the Editors and a member of the Board of Editors for completeness, clarity, and contribution to the literature. Research Methods are assigned a digital object identifier (DOI).

A structured abstract of 200 words or less organizes information with descriptive headings similar to those of a Research Article:

- **Objective**: Specifies the primary purpose or objective(s) of the study and/or hypotheses tested.
- **Design**: Describes the basic research design, methods used to collect data, timing and sequence of intervention, and data collection.
- **Setting**: Describes the study setting.
- **Participants**: States the number of participants or subjects/objects of observation by group and subgroup and describes how they will be selected.
- **Intervention(s)**: Describes the essential features of the intervention(s), including setting, methods, and duration.
- **Main Outcome Measure(s)**: Specifies dependent and independent variables and describes how each variable will be measured.
- **Analysis**: Summarizes how data will be analyzed quantitatively and/or qualitatively and specifies the level used to determine statistical significance of quantitative results.

Research Methods include the following major sections: Introduction, Methods, and Discussion (which should describe the protocol's strengths and limitations as described to funding agencies). They should not include sections for Results or Implications for Research and Practice.

The future tense of verbs is used throughout Research Methods.
Similar and Different

Original Research

Introduction
- Identify Gaps in Knowledge
- Objectives/Hypotheses

Methods
- Research design, sampling methods, recruitment strategies, measurement instruments (validity and reliability), data collection procedures, statistical analyses

Results
- Key Findings

Discussion
- Interpret results in context of the current knowledge
- Strengths and Limitations

Research Methods

Introduction
- Identify Gaps in Knowledge
- Objectives/Hypotheses

Methods
- Research design, sampling methods, recruitment strategies, measurement instruments (validity and reliability), data collection procedures, statistical analyses

Results
- NONE

Discussion
- Strengths and Potential Limitations
- Anticipated Outcomes
Question time!
Resources

- Guidelines for Authors, [www.jneb.org](http://www.jneb.org)
- [http://www.healthknowledge.org.uk/e-learning/epidemiology/practitioners/introduction-study-design-is-rct](http://www.healthknowledge.org.uk/e-learning/epidemiology/practitioners/introduction-study-design-is-rct)
- [http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4083571/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4083571/)