

SMA “Pub” Crawl Workshops May 2024

JOMSR, Theory Testing, and Replication Studies

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Overview of Presentation

- (1) JOMSR background and mission
- (2) What it means to test theory
- (3) Types of replication and reproducibility (RR) studies
- (4) Tips for designing RR studies to avoid mistakes

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J·O·M·S·R

Journal of MANAGEMENT
SCIENTIFIC REPORTS

Maria L. Kraimer, Editor

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JOMSR background

- JOMSR was launched by the Southern Management Association (SMA) in 2022 to create a publication outlet to test theory, rather than contribute new theory
- Published by Sage
- Volume 1 (2023) included 14 articles
- Volume 2 (2024) thus far includes 8 articles

*JOMSR Mission: to move management science forward by publishing research aimed at **theory testing and refinement***

Empirical research only

- no theoretical models or narrative reviews

All methods welcome

- qualitative and quantitative field studies, survey data, archival data, experimental designs, simulations, meta-analyses, mixed methods

Macro- and Micro-management topics

- Organizational-, team-, individual-, or multi-level research; Entrepreneurship, HRM, organizational behavior, organizational theory, strategy topics broadly defined

Submission options for initial review

<https://mc.manuscriptcentral.com/jomsr>

Original Research, Full Submission

- *a completed original study is presented in full, which typically will include hypotheses, method, results, and discussion sections in the initial submission.*

Original Research, Results-Masked Submission

- *a completed original study is presented, but the initial submission does not include the study's results or discussion; the submission should include introduction, hypotheses, and methodological details to allow evaluation of the research.*

Invited Editorial Submissions

- *methodological articles in which the authors provide recommendations on how to conduct studies that support JOMSR's mission, submitted by invitation from the Editor-in-Chief. If you have an idea for a methodological contribution to JOMSR, please contact Maria Kraimer directly.*

Evaluation Criteria for *JOMSR* Papers

Note: all papers go through a double-blind review process

1. How does the study contribute to theory refinement?

- Authors should clearly explain the theory being tested and how the current study confirms, generalizes, limits, or refutes the theory.

2. Is the study rigorously designed, appropriate for testing of theory/hypotheses, and based on recommended practices for balancing internal and external validity?

- Multiple studies within a single paper are **not** expected.

3. Are there clear implications for future research testing the specific theory and for advancing the broader knowledge to which the specific theory contributes?

JOMSR Editorial Team

- Editor-in-Chief, **Dr. Maria L. Kraimer** at Rutgers University
- Senior Associate Editor, **Dr. Xavier Martin** at Tilburg University
- Associate Editor (macro research), **Dr. Bill Schulze** at University of Utah
- Associate Editor (micro research), **Dr. Scott Seibert** at Rutgers University
- 80 Editorial Board Members

What does theoretical testing and refinement mean?

Constructive Replication and Generalizability Studies

- Tests to replicate findings from a published study in a new context/sample, with different measures, superior analyses, and/or different control variables

Tests of Competing Theories

- Empirically evaluate two different theories explaining the same phenomenon

Tests of Previously Untested Theories

- Empirical tests of published theoretical models or tests of theoretical assumptions

Testing Competing Theories Example:

Bermiss, S., Green, J., & Hand, J. R. M. (2023). A reinvestigation of the stock price reactions to announcements of Black top executive appointments. *Journal of Management Scientific Reports*, (3-4), 229-259.

Question

- Do shareholders respond more positively or negatively to the appointment of leaders who are racial minorities?

Theory 1 (Gligor et al., 2021 SMJ)

- Racial stereotypes theory
- Expect a negative reaction

Theory 2 (Jeong et al., 2022 SMJ)

- Higher bar (competence) theory
- Expect a positive reaction

Tests of Theoretical Models or Assumptions

- Test a subset of selected propositions from an AMR or JOM conceptual article (most AMR articles are never empirically tested)
- Test assumptions of a theory
 - *Example:* Tosti-Kharas, J., Dobrow, S. R., & Kappes, H. B. (2024). Do what you love and you'll never work a day in your life? Testing fundamental assumptions about calling, effort, and enjoyment. *JOMSR*, 2(1), 100-130.
 - They empirically tested the “calling-effort relationship” that is a fundamental assumption of the calling construct: whether people experiencing a strong “calling” for their work invest more effort into their work tasks, compared to someone with a weaker calling, even when the task is mundane.

Theory testing is **not** application of a theory to develop a hypothesized relationship

- Hypotheses should be testing key tenets of a theory
- This means testing the “mechanisms” that explain the relationship between two variables (i.e., mediators or moderators)
- A general statement such as “Based on social exchange theory, we expect A to be related to B” is not theory testing (for our purposes)

Types of Replication and Reproducibility Studies

Reproducibility versus Replication

(Koehler & Cortina, 2021, JOM; 2023, JOMSR)

Reproducibility studies

- A **single data set** is re-analyzed to test the **same relationships** more than once
- Can be **dependent** (same researcher) or **independent** (different researcher)
- If the results and conclusions are the same, reproducibility is achieved

Replication studies

- The same relationships between/among the same variables are tested, but with a **different data set**
- Can be **dependent** (same researcher) or **independent** (different researcher)
- A replication study is not the same as replication of results.

Different Types of RR Studies

Exact or Literal Replication

- Repeat exactly the same procedures (sample, research design, manipulations/measures, procedures, etc.); actually very hard to do

Quasi-random Replication

- Repeat some of the same procedures and design, but with some variations that are not necessarily improvements

Constructive Replication

- Repeat some of the same procedures and design, but with some variations that represent *an improvement* in the study design

Generalizability Studies

- A (constructive) replication study that also examines for variation based on a *substantive* (theoretical) moderator (i.e., “replication and extension”); Kohler & Cortina do not consider these replications, but we welcome them at JOMSR

Why these studies are important to theory testing

- Independent exact (or literal) replications and reproducibility studies can **confirm or disconfirm initial studies**
 - *Which over multiple studies, helps to eliminate unnecessary theories*
- Constructive replications and generalizability studies examine methodological or theoretical boundary conditions, or can test assumptions, of initial studies
 - *Provides a deeper understanding of the theory or phenomena*

Example: Obenauer, W. G. (2023). More on why Lakisha and Jamal didn't get interviews: Extending previous findings through a **reproducibility study**. *Journal of Management Scientific Reports*, 1(2), 114–145.

- Bertrand & Mullainathan (2004, AER) study sent almost 5000 fictitious resumes to employers and found that “White-sounding” names (e.g., Emily and Greg) benefited more from their experience and received 50% more interview invitations than applicants with “African-American-sounding” names (e.g., Lakisha and Jamal). B&M (2004) has over 6000 citations.
- Obenauer (2023) re-analyzed the same data used in B&M (literal reproducibility) and found (mostly) the same results, but also...
- Re-coded the applicant names to test differences based on **Arabic origin** (e.g., Jamal, but not Lakisha) and **name frequency in the population** (constructive reproducibility)

Obenauer (2023) findings

- Among Non-White applicants: those with non-Arabic names received 1.874 times as many callbacks as those with Arabic names.
- Among all applicants: those with “White-sounding” names received 2.576 times as many callbacks as those with Arabic names.
- The “Arabic-name” disadvantage was distinct from having a non-White name.
- The “Arabic-name” disadvantage was significant after controlling for the frequency of the name in the general population, but “Non-White” name was no longer significant.

Contribution: Anti-Arab bias may have contributed to B&M's (2004) findings attributed to race (White versus African-American).

Choosing studies to reproduce/replicate

- Studies that have important implications for management practice or have generated a lot of media attention
- Studies reporting a “surprising” or non-intuitive finding
- Studies in which the original authors made a lot of methodological decisions that are not well-justified or are clearly limitations
- A high impact (i.e., well-cited) “older” paper that was analyzed with inferior techniques compared to today’s analytical tools
- Articles in which the data is available (for reproducibility) or the authors provided transparent detail about their methods (open science reports or on-line supplemental material) will make it easier to reproduce/replicate
 - *You may need to contact original authors to get more details*

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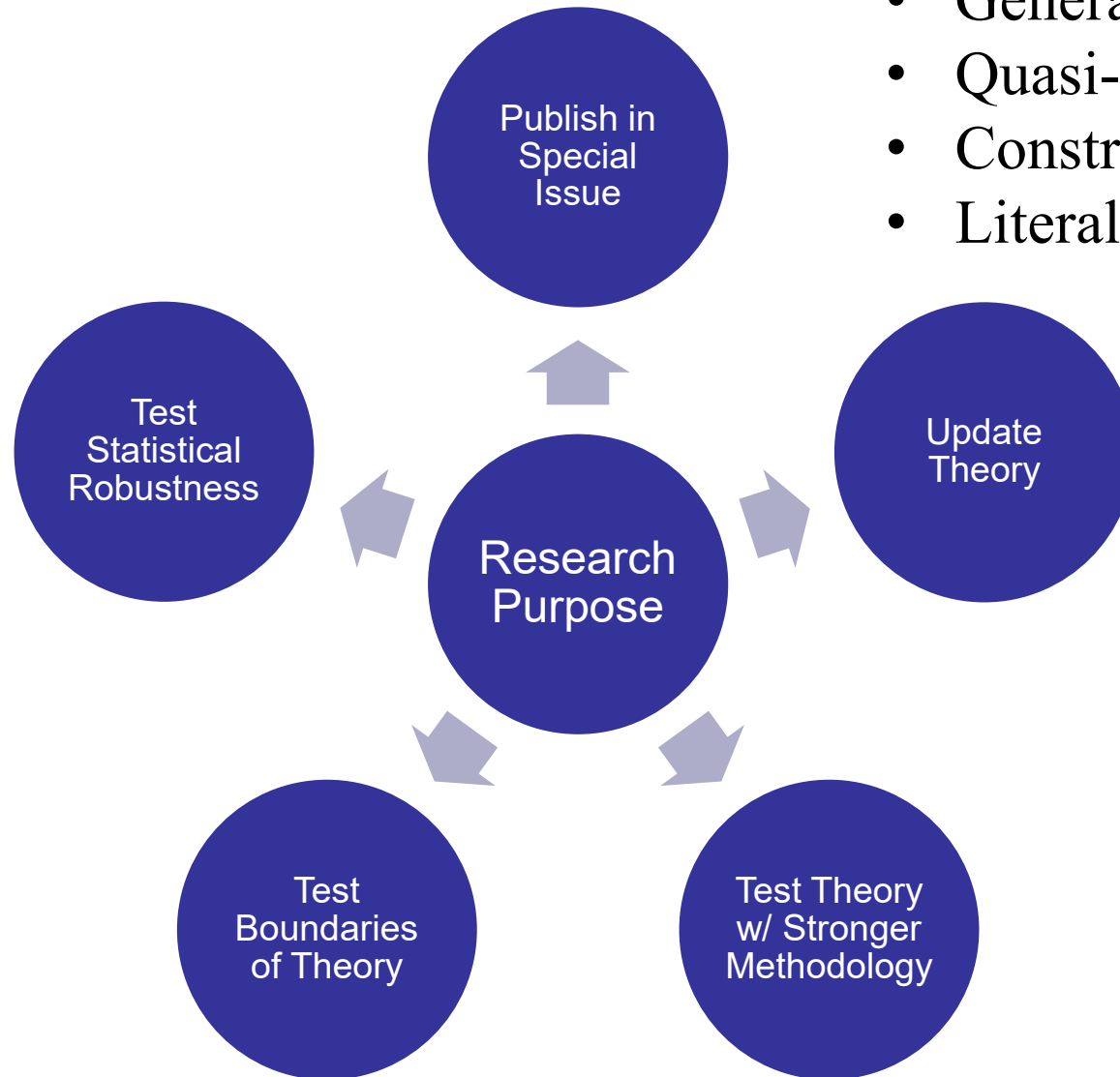
TIPS FOR DESIGNING REPLICATION STUDIES

Thanks to Billy Obeneaur for letting
me borrow a few of his slides

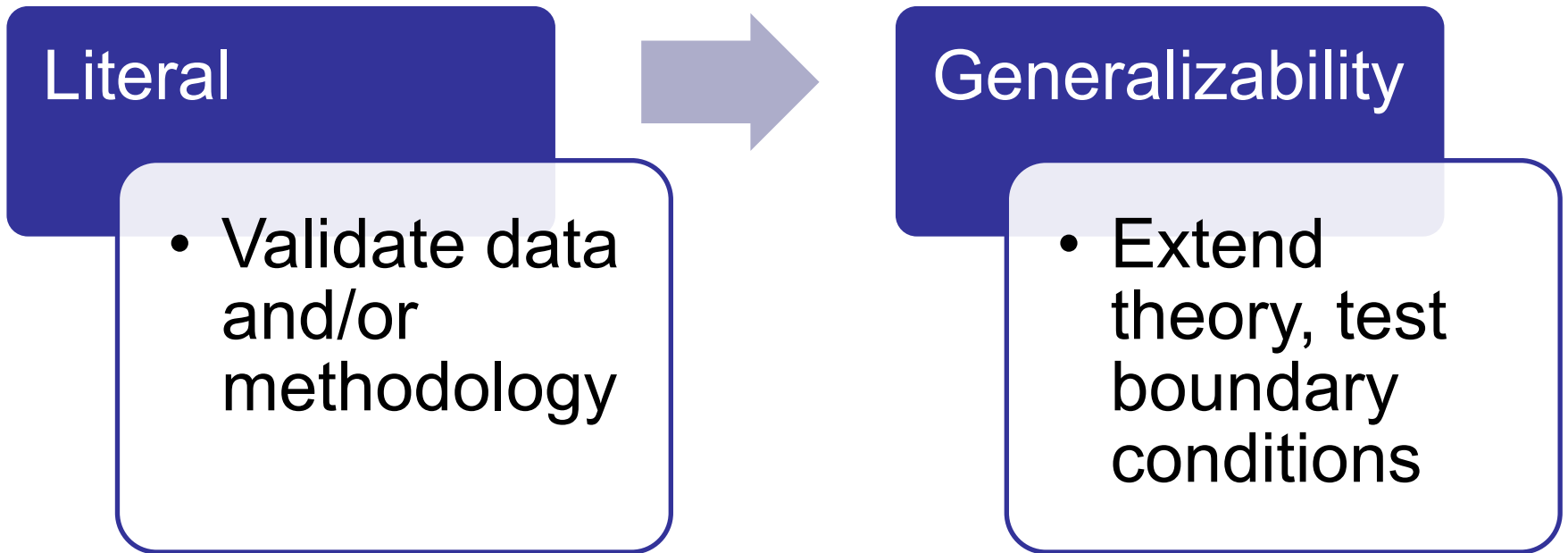
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Identify your purpose(s) to determine type of replication study

- Generalizability
- Quasi-random Replication
- Constructive Replication
- Literal Replication



A generalizability study should include a “literal” replication



Testing for generalizability without direct replication makes it challenging to isolate causes when findings differ from the target study

Tips for Designing Constructive Replication Studies

1. Recognize the strengths of the original study's research design and be sure to retain those elements (otherwise, your replication study is confounded or regressive)
2. Think about the “ideal” design improvements that would allow one to draw stronger conclusions about the original study's hypotheses, consider:
 - *sampling error or generalizability;*
 - *reliability and validity of measures;*
 - *realism of experimental manipulations;*
 - *temporal timing between measures;*
 - *control variables;*
 - *common method bias issues;*
 - *endogeneity issues;*
 - *data handling concerns (missing values, outliers);*
 - *unfounded assumptions*

Tips for Designing Constructive Replication Studies

3. Be realistic about which improvements you can achieve in your replication study (two or three improvements may be all you can do)
4. Consider adding a substantive, theoretical, moderator to original hypotheses if you wish to test for generalizability of the findings at the same time
5. Remember: Rigorous methods is just as important for replication studies as any other empirical study (if not more so)

Tips for Writing the Paper

Introduction:

- *briefly review the target study, explain why it is need of replication, and how you approached your replication study*
- *Briefly summarize the theory and state hypotheses you are replicating*

Methods:

- *Clearly explain what is the same and what is different from target study*

Results:

- *If possible, provide literal replication analyses first*
- *Be clear on which hypotheses' findings were replicated and which were not*
- *A Table with results from target publication and your study is helpful*

Discussion:

- *Do NOT overstate findings or make unsubstantiated claims*
- *Report boundary conditions of your findings*
- *Identify limitations*

Keep in mind one reviewer may be an author of target study; one reviewer will be unfamiliar with target study.

Published articles that may inspire you...

- Köhler, T., & Cortina, J. M. (2023). Constructive replication, reproducibility, and generalizability: Getting theory testing for JOMSR right. *Journal of Management Scientific Reports*, 1(2), 75–93.
- Obenauer, W. G. (2023). More on why Lakisha and Jamal didn't get interviews: Extending previous findings through a **reproducibility study**. *Journal of Management Scientific Reports*, 1(2), 114–145.
- Obenauer, W. G. (2024). Designing, executing, and publishing replication research: Best practices for successfully taking replication ideas from conceptualization to publication. *Journal of Management Scientific Reports*, 2(1), 3-26.



Questions?