

CARMA Webcast Lecture Series

Publishing High-Impact Meta-Analyses: An Editor's Perspective

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An Editor's Perspective, Backed by Data

- My experience as an Associate Editor at *Psychological Bulletin* (Impact Factor = 17.3) from 2020 to present;
- A review of recently published meta-analyses in top-tier journals (2020 – present).

Publication statistics

Journal Title	Number of Published Meta-Analysis since 2020
<i>Academy of Management Journal</i>	1
<i>Strategic Management Journal</i>	3
<i>Journal of Applied Psychology</i>	58
<i>Journal of Management</i>	23
<i>Personnel Psychology</i>	16
<i>Psychological Bulletin</i>	166
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The evolution of meta-analyses

How it started

(Smith & Glass, 1977; Schmidt & Hunter, 1977)

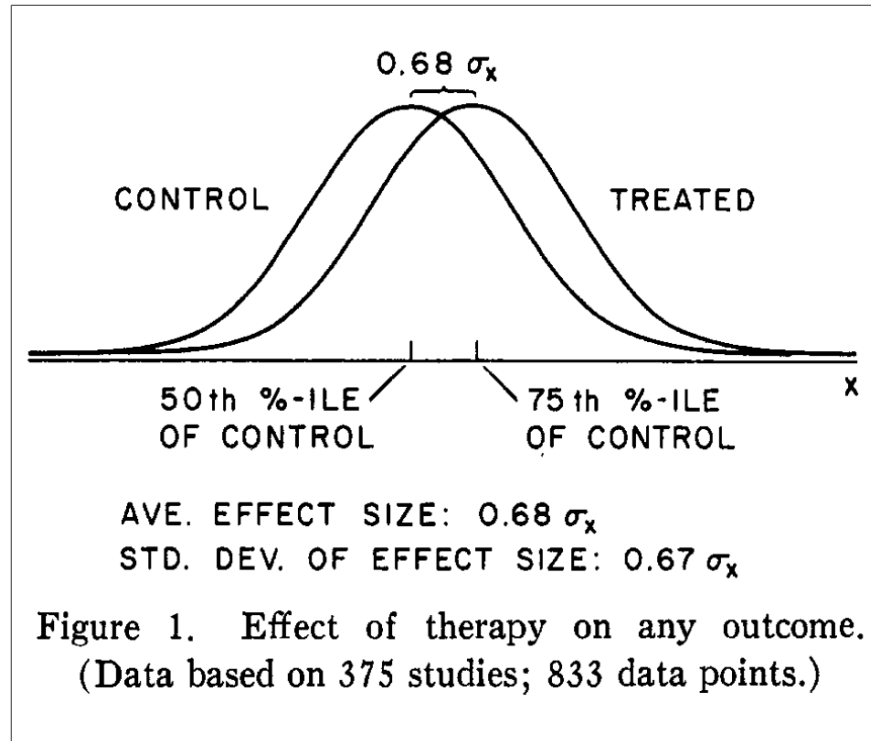
How it's going

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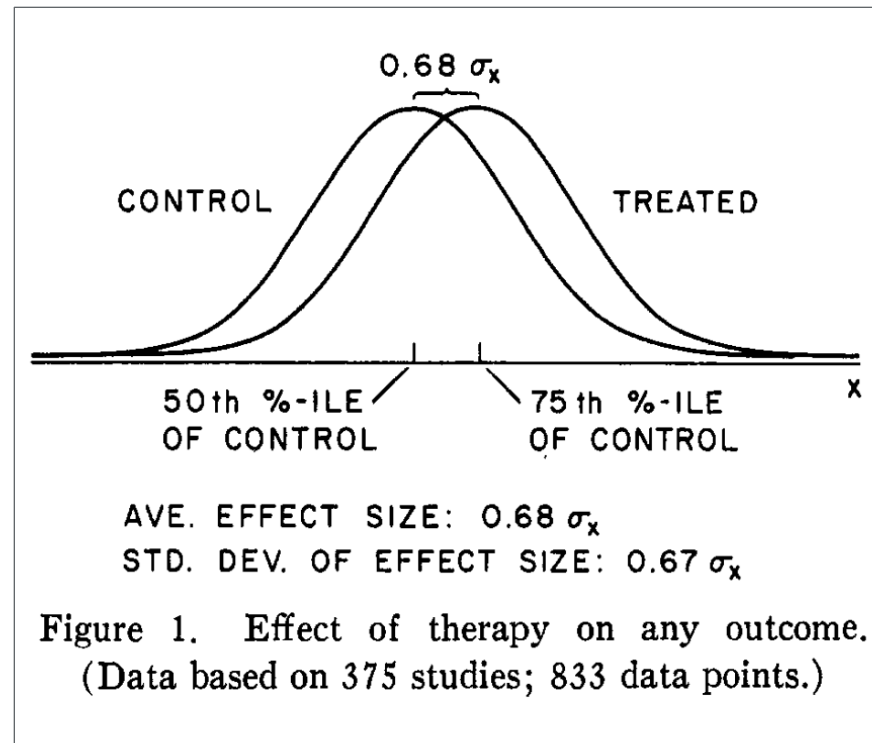
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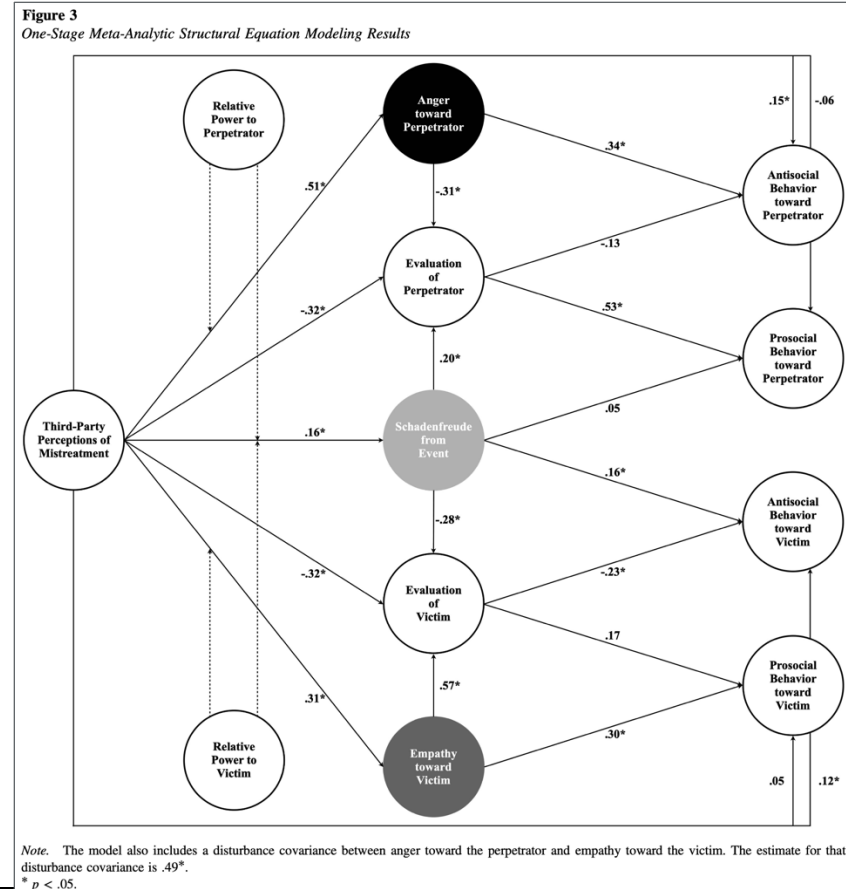
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How it's going



The evolution of meta-analyses

Recent meta-analyses often...

- Seek to make greater theoretical/conceptual contributions through the meta-analytic findings beyond their empirical contributions
- Focus more on understanding boundary conditions and explaining mechanisms of theoretical relationships, in addition to summarizing weighted average relationships
- Have increased scale and complexity of methods (e.g., secondary uses of meta-analytic data)

Understanding boundary conditions

- Two goals of meta-analysis
 - Summarizing the weighted average relationship
 - Explaining inconsistencies across studies and identifying sources of differences in study findings

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 - Summarizing the weighted average relationship
 - **Explaining inconsistencies across studies and identifying sources of differences in study findings**
- Linden and Hönokopp (2021) surveyed 150 meta-analyses in several areas of psychology, including organizational psychology, and found very high levels of heterogeneity (also see Stanley et al., 2018)

Understanding boundary conditions

- 46 out 50 (92%) published meta-analyses in *JAP* (01/01/2020 – 04/23/2025) examined moderators
- Example: Hora et al. (2021, *JAP*) gender differences in creative performance
 - Country/culture
 - Time
 - Creativity type
 - Rating source

Understanding boundary conditions

- Common mistakes:
 - Focusing on the weighted average effect size and its statistical significance
 - The selection of moderators is not theory-driven

Improving construct clarity

- The jingle-jangle fallacy in our science and the “apples and oranges” problem in meta-analysis

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- Conducting a meta-analysis is a great opportunity to help clean up the construct space and improve construct clarity in a field

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- Examples:
 - Zhang et al. (2023, *JAP*) human capital resources
 - Liao et al. (2022, *Psych Bulletin*) outcomes of prosocial motivation

Improving constru

- Zhang et al. (2023, *JAP*)
 - Conceptual review
 - Content validity study
 - Meta-analysis

Table 6

Results of Content Validity Analysis of HCR Measures (Study 2)

Content of measures	Fully contaminated		Partially contaminated		Uncontaminated		Partially and uncontaminated	
	<i>k</i>	%	<i>k</i>	%	<i>k</i>	%	<i>k</i>	%
HCR dimensions								
Knowledge			16	27.1	14	46.7	30	33.7
Skills			44	74.6	9	30.0	53	59.6
Abilities			18	30.5	4	13.3	22	24.7
Other characteristics			1	1.7	6	20.0	7	7.9
Compound KSAOs								
Competencies			21	35.6	9	30.0	30	33.7
Expertise			20	33.9	6	20.0	26	29.2
Capabilities			3	5.1	1	3.3	4	4.5
Creativity			19	32.2	0	0.0	19	21.3
Other			6	10.2	2	6.7	8	9.0
Number of HCR dimensions								
One			28	47.5	15	50.0	43	48.3
Two			18	30.5	9	30.0	27	30.3
Three			5	8.5	0	0.0	5	5.6
Four			0	0.0	0	0.0	0	0.0
Compound KSAOs only			8	13.6	6	20.0	14	15.7
Non-HCR constructs								
Work experience	13	34.2	18	30.5			18	20.2
Education	15	39.5	17	28.8			17	19.1
HPWPs	4	10.5	16	27.1			16	18.0
Work activities	2	5.3	16	27.1			16	18.0
Performance	6	15.8	10	16.9			10	11.2
Uniqueness	0	0.0	5	8.5			5	5.6
Other types of resources	5	13.2	4	6.8			4	4.5
Other constructs	5	13.2	8	13.6			8	9.0
Unclear	14	36.8	21	35.6			21	23.6
Total	38	29.9	59	46.5	30	23.6	89	70.1

Note. Total *k* = 127 unique measures. HCR = human capital resources; HPWPs = high-performance work practices; Unclear = unclear constructs that may or may not be relevant to KSAOs; KSAOs = knowledge, skills, abilities, other characteristics. Because some measures capture more than one HCR dimension or construct, the numbers of studies for HCR dimensions or non-HCR constructs do not add up to the total number of studies for the corresponding category.

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- Liao et al. (2022, *PB*)
 - Autonomy
 - Generality/specificity
 - Self-interest

Table 2
An Integrative Conceptual Framework of Prosocial Motives

Bandwidth at which prosocial motives are conceptualized and operationalized	Degree of volition in prosocial motives	
	Discretionary	Obligatory
Global: Prosocial motives as an overall identity or general orientation toward benefiting others	<p><i>Definition:</i> A global motivational orientation to benefit others in general across time and context because it is enjoyable, reflects one's true self, or is personally meaningful.</p> <p><i>Constructs and example measures/items:</i></p> <p>Pleasure-based prosocial motivation (Gebauer et al., 2008): "Supporting other people makes me very happy."</p> <p>Prosocial identity (Grant et al., 2008): "I see myself as caring/generous."</p> <p>The benevolence dimension of the Schwartz Value Survey (Schwartz & Sagiv, 1995): Leading question: "How important are the following values as guiding principles in your life?" Item: "Being helpful."</p>	<p><i>Definition:</i> A global motivational orientation to benefit others in general across time and context because of internal or external pressure.</p> <p><i>Constructs and example measures/items:</i></p> <p>Pressure-based prosocial motivation (Gebauer et al., 2008): "I feel obligated to perform selfless acts towards others."</p> <p>Prosocial obligation (Brummel & Parker, 2015): "I ought to spend more time helping others."</p> <p>Ford and Nichols (1992) scenario-based measure (e.g., "You are asked to donate food or money for needy children in your community. Donations must be dropped off at the offices of a local charity. Would it bother you if you didn't donate anything?")</p>
Contextual: Prosocial motives in the domain of work/career/occupation	<p><i>Definition:</i> A motivational orientation to benefit others in the work domain through one's career or occupation because it is enjoyable, reflects one's true self, or is personally meaningful.</p> <p><i>Constructs and example measures/items:</i></p> <p>Prosocial motivation at work (Grant, 2008a, 2008b; Grant & Sumanth, 2009): "At work, I care about improving the welfare of other people."</p> <p>Social interests (Donnay et al., 2005): Respondents are instructed to indicate the extent to which they like or dislike certain work activities such as "Helping others overcome their difficulties."</p>	<p><i>Definition:</i> A motivational orientation to benefit others in the work domain through one's career or occupation out of internal or external pressure.</p> <p><i>Constructs and example measures/items:</i></p> <p>Commitment to public interest (Perry, 1997): "I consider public service my civic duty" (occupations are in the public service sector).</p>
Positional: Prosocial motives within a specific job role/position or toward a specific target	<p><i>Definition:</i> A motivational orientation to help a specific beneficiary or group of beneficiaries such as coworkers, protégés, or customers through organizational citizenship behavior, mentoring, or customer service within a specific job role, position, or organization because it is enjoyable, or reflects one's true self, or is personally meaningful.</p> <p><i>Constructs and example measures/items:</i></p> <p>Other-orientation at work (De Dreu & Nauta, 2009): "At work ... I am concerned about the needs and interests of others such as my colleagues."</p> <p>Prosocial motives for organizational citizenship</p>	<p><i>Definition:</i> A motivational orientation to help a specific beneficiary or group of beneficiaries such as coworkers, protégés, or customers through organizational citizenship behavior, mentoring, or customer service within a specific job role, position, or organization out of internal or external pressure, such as a sense of obligation.</p> <p><i>Constructs and example measures/items:</i></p> <p>Other-orientation work value (Ravlin & Meglino, 1987): <i>Should or ought to</i> "help others on difficult jobs."</p> <p>Helping role perceptions (Podsakoff et al., 1990): The extent to which employees feel</p>

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 - Increase transparency
 - Prevent misguided literature searches
 - Help identify important boundary conditions for construct relationships

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Theory-testing and theory-building

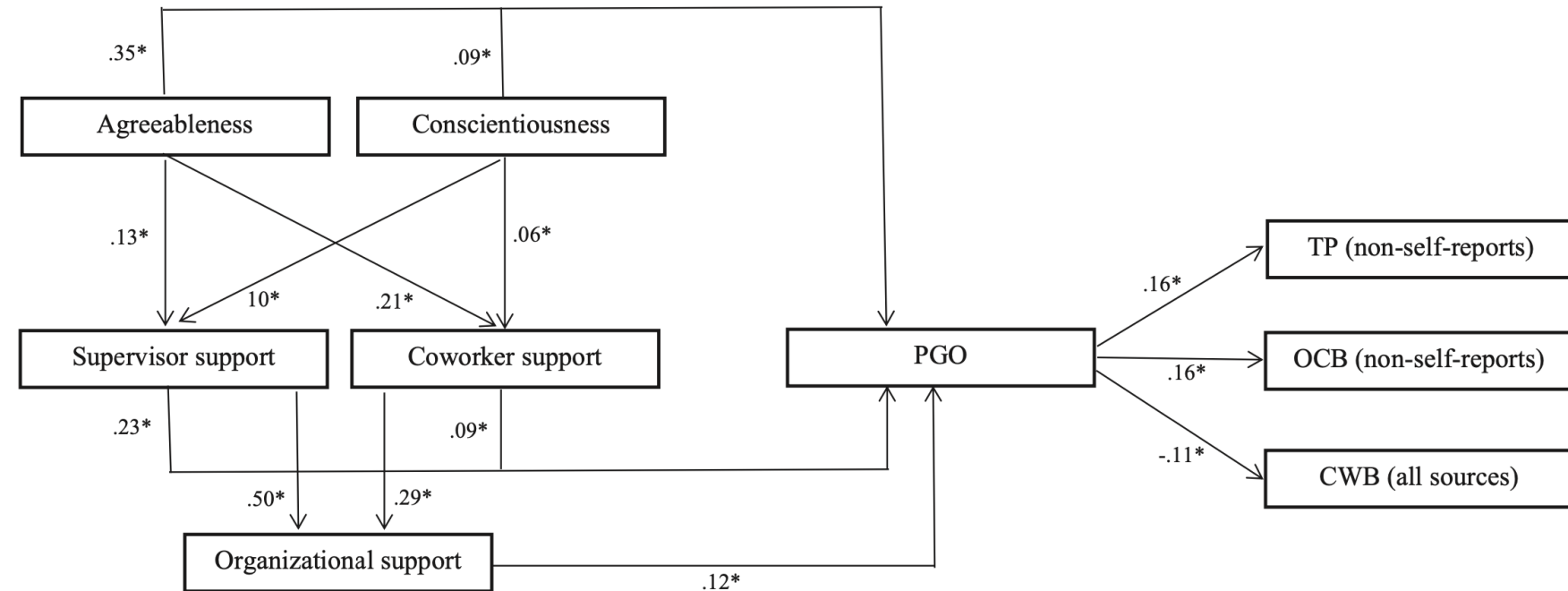
- 20 out 50 (40%) published meta-analyses in *JAP* (01/01/2020 – 04/23/2025) reported at least one type of secondary analysis with meta-analytic data, including meta-analytic incremental validity analysis, meta-analytic relative weight analysis, and meta-analytic path modeling/structural equation modeling
- Examples:
 - Ng (2025, *JAP*) Perceived general obligation
 - Ogunfowora (2022, *JAP*) moral disengagement at work

Theory-testing and theory-building

- Ng (2025, *JAP*)

Figure 2

The Proposed Model and Parameter Estimates



Note. PGO = perceived general obligation; TP = task performance; OCB = organizational citizenship behavior; CWB = counterproductive work behavior. Effect sizes represent standardized estimates. The direct effects of organizational support, supervisor support, coworker support, conscientiousness, and agreeableness on each performance outcome were controlled for, although not shown in the figure.

* $p < .05$.

Theory-testing and theory-building

- Ogunfowora et al. (2022, *JAP*)

Table 9

Incremental Validity of Moral Disengagement Over Four Dark Traits in Predicting Workplace Misconduct and OCBs

Variable	Workplace misconduct				Organizational citizenship behaviors			
	Regression		Relative weight analyses		Regression		Relative weight analyses	
	Step 1 β	Step 2 β	Raw relative weight	Relative weight %	Step 1 β	Step 2 β	Raw relative weight	Relative weight %
Machiavellianism	.28**	.01	.05	6.70%	-.42**	-.40**	.06	26.62%
Narcissism	.49**	.76**	.19	23.42%	-.23**	-.25**	.02	10.32%
Psychopathy	-.39**	-1.16**	.18	21.54%	-.21**	-.16**	.04	17.01%
Psych. Entitlement	.09**	-.28**	.06	7.47%	.62**	.64**	.08	34.71%
Moral disengagement		1.30**	.34	40.87%		-.09**	.03	11.33%
R^2	.29**	.82**			.22**	.222**		
ΔR^2		.53				.002		

Note. β = standardized regression coefficients. Corrected = regression analyses results conducted using reliability-correlated, meta-analytic correlation matrix (Table 1).

** $p < .01$.

Theory-testing and theory-building

- Ogunfowora et al. (2022, *JAP*) input meta-analytic correlation matrix

Table 1

Meta-Analytic Correlation Matrix of Moral Disengagement, Theoretical Correlates, Workplace Misconduct, and OCBs

Variable	1	2	3	4	5	6	7
1. Moral disengagement		(21, 10,525)	(17, 8,770)	(17, 9,119)	(6, 3,677)	(133, 40,255)	(12, 3,636)
2. Machiavellianism	.67 ^a		(44, 8,423)	(32, 5,762)	(4, 3,107)	(13, 2,546)	(6, 2,166)
3. Narcissism	.33 ^a	.30 ^b		(42, 8,538)	(11, 4,921)	(9, 2,708)	(5, 1,573)
4. Psychopathy	.76 ^a	.59 ^b	.51 ^b		(6, 4,156)	(27, 6,058)	(5, 1,573)
5. Psych. Entitlement	.61 ^a	.64 ^a	.62 ^a	.55 ^a		(18, 4,698)	(4, 1,001)
6. Workplace misconduct	.51 ^a	.25 ^b	.43 ^b	.07 ^b	.35 ^a		(49, 16,721)
7. OCBs	-.17 ^a	-.22 ^a	-.09 ^a	-.24 ^a	.09 ^a	-.32 ^c	

Note. ρ values are reported below the diagonal, while k and N values are reported above the diagonal. Values reported are mean sample size-weighted correlations corrected for unreliability in both variables using alphas; k = number of independent studies, and N = cumulative sample size. Harmonic mean = 3501.44.

^aOriginal meta-analysis. ^bCorrelations taken from O'Boyle et al. (2012). ^cCorrelations taken from Dalal (2005).

Theory-testing and theory-building

- Common problems:
 - Model selection is not supported by strong theoretical rationale and missed variables in the model
 - Cherry-picking input meta-analytic correlation(s) (Park et al., 2020)
 - Ignoring heterogeneity in meta-analytic effect size estimates (Yu et al., 2016)
 - only 6 out of 14 recently published meta-analyses in JAP (01/01/2020 - 04/23/2025) that tested a meta-analytic path model considered heterogeneity in their analysis
 - Drawing causal conclusions from correlational data

True effect heterogeneity in MASEM

- Example studies that have implemented full-information meta-analytic structural equation modeling (FIMASEM; Yu et al., 2016) in their meta-analytic path models:
 - Fang et al. (2021, *JAP*) gender and social network brokerage
 - Chung et al. (2022, *JAP*) training motivation
 - Xu et al. (2023, *JAP*) organizational commitment and job satisfaction
 - Javalagi et al. (2024, *JAP*) personality and leadership
 - Kim et al. (2024, *JAP*) gender differences in creativity
 - Ng (2025, *JAP*) Perceived general obligation

Causal inferences in meta-analysis

- When the nature of the data is correlational, one cannot draw causal conclusions
- Example meta-analyses of experimental studies (5/50, 10%):
 - Liu et al. (2021, *JAP*) stereotype threat interventions
 - von Allmen et al. (2024, *JAP*) work-nonwork interventions
 - Priest et al. (2024, *JAP*) stereotype lift and stereotype threat effects
 - Costa (2024, *JAP*) interventions to reduce discriminatory behaviors at work
 - Moon et al. (2025, *JAP*) efficacy of faking warning

Incorporating time in meta-analysis

- Ways to incorporate time in meta-analysis:
 - Time as a moderator
 - Meta-analyses of longitudinal data (Giletta et al., 2021, *Psych Bulletin*; Harris & Orth, 2020, *JPSP*; Xu et al., 2023, *JAP*)
 - New development: continuous time meta-analysis (CoTiMA; Dormann et al., 2019; Example: Guthier et al., 2020, *Psych Bulletin* on job stressors and burnout)

“How big does my meta-analysis need to be?”

- For recently published meta-analyses in *JAP* (01/01/2020 – 04/23/2025), k s range from 26 to 753 with a mean = 175.67 and median = 134

“How big does my meta-analysis need to be?”

- For recently published meta-analyses in *JAP* (01/01/2020 – 04/23/2025), k s range from 26 to 753 with a mean = 175.67 and median = 134
- Key considerations:
 - What variables need to be in the meta-analysis?
 - Robust estimation of true effect heterogeneity
 - Sufficient variability and power for detecting moderator effects

Summary

- Meta-analyses can make significant theoretical/conceptual, empirical, practical contributions to the field. To maximize the contributions of a meta-analysis, pay attention to
 - Construct clarity
 - Heterogeneity and boundary conditions
 - Theory-driven model selection
 - Methods that align with intended theoretical conclusions

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THANK YOU!

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Q&As