

Nunes, K. L., Hatton, C. E., & Pham, A. T. (2024, June 21-23). Do attitudes cause violence? Researchers' interpretations of evidence from different research designs? [Paper presentation]. Canadian Psychological Association Convention, Ottawa, Ontario, Canada.

## Do Attitudes Cause Violence? Researchers' Interpretations of Evidence from Different Research Designs

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## Correlation and Causation

- Correlation does not demonstrate causation
  - (Shadish et al., 2002; Weisburd, 2010)
- Inferring causation from correlation can lead to erroneous explanations and ineffective or even harmful interventions and policies
  - (e.g., Harris & Rice, 2015; McCord, 2003; Petrosino et al., 2003; Rice & Harris, 2003)



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- Inferring causation from correlation is common among the general public and professionals
  - (e.g., Bleske-Rechek et al., 2015; Harris & Rice, 2015; Motz et al., 2023; Mueller & Coon, 2013; Nunes & Hatton, 2023; Seifert et al., 2022; Sibulkin & Butler, 2019)
- And among researchers
  - Harris & Rice (2015)
  - Nunes et al. (2019, 2024)



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## Violence Researchers' Inferences (Nunes et al., 2019, 2024)

- Generally appropriate conclusions when asked directly about causality
- Failure to acknowledge plausible alternative interpretations (e.g., reverse causality, third variable)
  - 50.0%-88.9%
- Endorsement of invalid conclusions regarding implications
  - 77.8%-100%



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## Limitations of Past Research

- The extent of the problem may have been exaggerated by Nunes et al.'s (2019, 2024) focus on studies that participants chose themselves
  - Memory/focus?
  - Research expertise correlated with study selection?



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## Current Study

- Randomly assigned authors of articles in scientific journals on violence to read a brief description of one of 12 hypothetical studies, which varied in research design and intuitiveness of the results
- Asked questions about their interpretations of the study



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### Research Design

- Description of a sample
- Cross-sectional non-experimental
- Single-wave longitudinal non-experimental
- Multi-wave longitudinal non-experimental
- Quasi-experiment
- Randomized experiment

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### Intuitive vs. Counterintuitive Results

- Intuitive: Violent attitudes associated with **more** violent offending
- Counterintuitive: Violent attitudes associated with **less** violent offending

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### Single-wave longitudinal non-experimental

- Researchers measured attitudes towards violence among a group of people at one time point and then reassessed them 10 years later to see who committed a violent offence after the initial measurement of attitudes towards violence. Those who committed a violent offence during the follow-up period had **more [fewer] pro-violence attitudes** at the time of the initial assessment than did those who did not commit a violent offence during the follow-up period

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### Recruitment

- Participants were recruited through emails sent to the authors of articles published in
  - Aggression and Violent Behavior
  - Aggressive Behavior
  - Journal of Aggression, Maltreatment, and Trauma
  - Journal of Interpersonal Violence
  - Psychology of Violence
  - Trauma, Violence, & Abuse
  - Violence and Victims
  - Journal of Aggression, Conflict and Peace Research
  - Journal of Sexual Aggression
  - Sexual Offender Treatment

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### Participants (N = 120)

- 75% working at a university/college
- 63% do research on violent (non-sexual) offenders and 51% on sexual offenders
- Most employed as professors (53%) or researchers (45%)
- Median 20 hours/week spent on research
- Mean 15 years doing research
- 82% did (or were doing) a quantitative study for graduate degree
- Mean 17 first-author quantitative articles published in peer-review journals
- 59% women
- Mean age = 42 years old

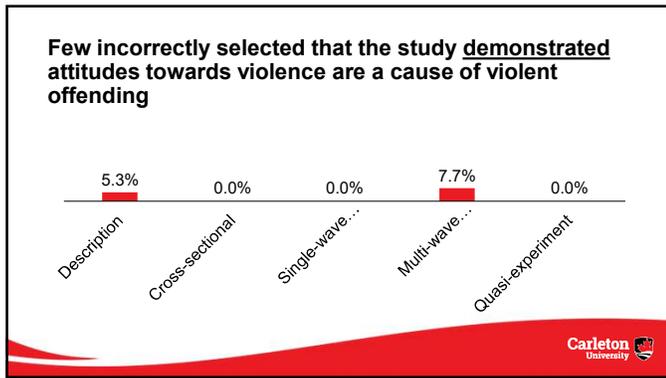
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### Questions About the Study Description

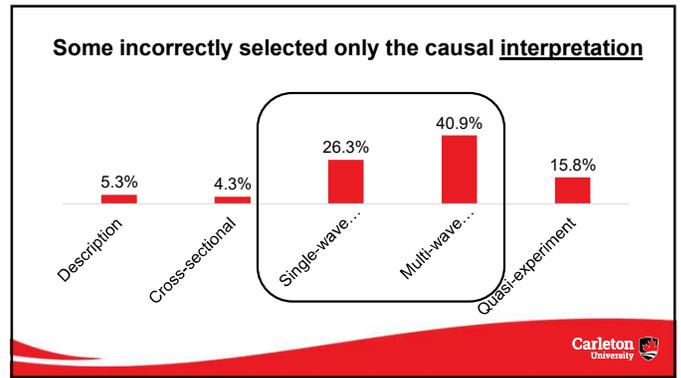
- Which of the following is **demonstrated** by the results of this study?
- Which of the following **interpretations** is consistent with the results of this study?
- Which of the **conclusions** below follows logically from the results of this study?

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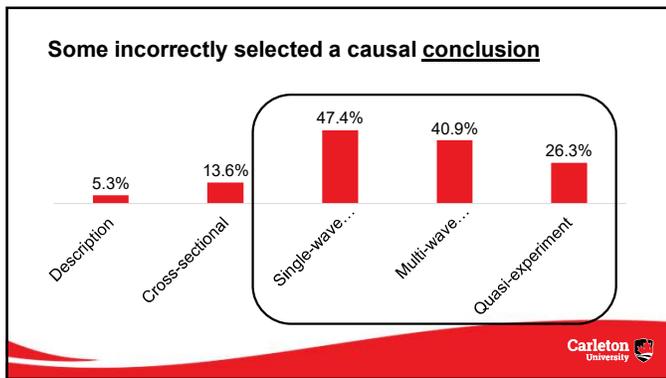
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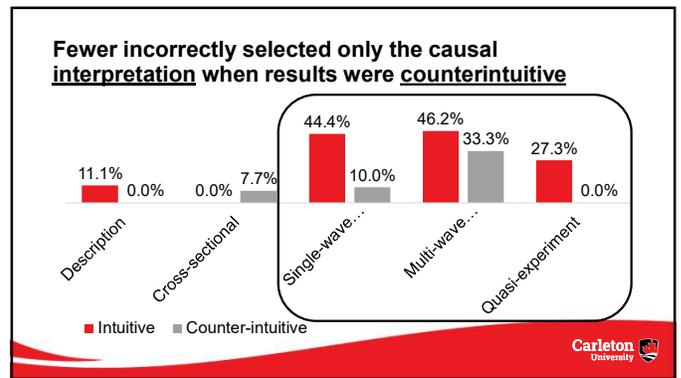
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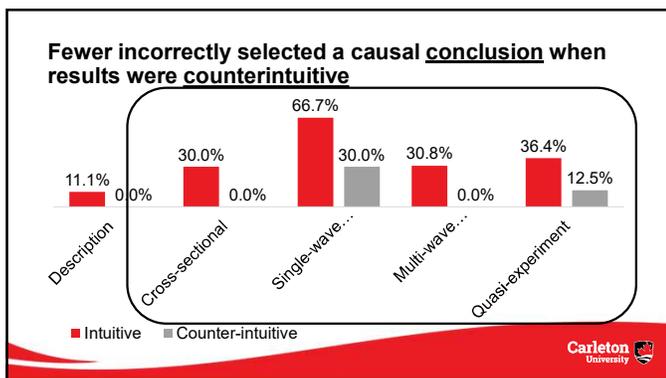
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**Discussion**

- Less overstepping than in our past studies
- But still some failure to acknowledge plausible alternative interpretations
- Still some endorsement of causal conclusions not warranted by research design
- Often less overstepping when results were counterintuitive

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### Limitations and Future Directions

- Small sample
- Low response rate
- Wording/format?
- Narrow/rigid focus on research design?
  - (e.g., Rohrer, 2018; Sampson, 2010)



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### Conclusion and Recommendation

- We should try to be more vigilant about matching the strength of our inferences to the methodological rigor of the evidence
- Engage critical thinking by considering the opposite? (Lord et al., 1984)
  - How would I interpret the results if they were opposite to my expectations?



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### Aggressive Cognitions and Behaviour Research Lab

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