

# New guidelines to improve reporting standards of studies that investigate causal mechanisms

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A new guideline has been developed to help scientists publish their research accurately and transparently. Published in *JAMA*, the

AGReMA Statement (A Guideline for Reporting Mediation Analyses) provides recommendations for researchers who want to describe mediation analysis in their paper. Mediation analysis is primarily used to understand how an intervention works or why it does not.

The checklists can be found on the AGReMA website, and the explanation and elaboration paper in *JAMA* explains the importance of each item and how the checklist can be used by authors, peer reviewers and journal editors.

Hopin Lee, NHMRC Postdoctoral Research Fellow at NDORMS and lead author explained: "The use of mediation analysis has grown rapidly over the past ten years across a wide range of disciplines. Our research has shown that their reporting has been poor and inconsistent, which makes it difficult to understand how the research was conducted and how reliable the findings are. We hope that the AGReMA statement will fix some of these issues."

Gary Collins, director of the UK EQUATOR center noted that "AGReMA was developed through a rigorous evidence- and consensus-based process using the EQUATOR methodological framework. We think it will be a useful tool for many researchers conducting mediation analyses of trials and observational studies."

Developed by an international team of methodologists, statisticians, clinical trialists, epidemiologists, psychologists, applied clinical researchers, clinicians, implementation scientists, evidence synthesis experts, representatives from the EQUATOR Network, and journal editors, the consensus-based checklist provides detailed steps to help researchers present clear and transparent reports that will raise the standard of reporting of mediation analyses.

"AGReMA is not tied to a particular disease condition or subspecialty of

medicine," said Hopin. "Our working group will liaise with journal editors and funding agencies to increase awareness and encourage its use. Our hope is that it will be endorsed by [journal editors](#), peer reviewers, and authors and improve the accuracy, completeness and consistency in reporting [mediation](#) analyses."

The development of AGReMA was supported by the Berkeley Initiative for Transparency in the Social Sciences, the Center for Effective Global Action, and the Laura and John Arnold Foundation.

**More information:** Hopin Lee et al, A Guideline for Reporting Mediation Analyses of Randomized Trials and Observational Studies: The AGReMA Statement, *JAMA* (2021). [DOI: 10.1001/jama.2021.14075](#)

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