



## Causal language and strength of inference in academic and media articles shared in social media (CLAIMS): A systematic review

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Study finds support for these hypotheses	
<i>Justification:</i>	<i>Hypotheses supported by this study:</i>
Primary study conclusions drawn from the main objectives, design, and results of this study. Replication, validation, and critical review of the methods and conclusions by independent parties are still necessary before results should be considered conclusive.	<ul style="list-style-type: none"> <li>- The academic articles assessing the relationship between an exposure and health outcome that were most shared on social media in 2015 have, on average:</li> <li>- Relatively low strength of causal inference</li> <li>- Slightly overstated strength of causal language</li> <li>- The media articles that were most shared on social media in 2015 reporting on academic articles assessing the relationship between an exposure and health outcome have, on average:</li> <li>- Overstated strength of causal language relative to both the language used in the academic article and independently-assessed strength of causal inference in that article</li> <li>- Inaccurate reporting on key properties of the study.</li> </ul>
Study DOES NOT assess or find support for these hypotheses	
<i>Justification:</i>	<i>Hypotheses not assessed/supported by this study:</i>
This study DOES NOT assess these hypotheses. Reporting any of these conclusions as a result of this study is inaccurate and a misrepresenting the results and conclusions of this study. At most, these hypotheses remain plausible given the results of this study, and could be considered hypothesis-generating. However, additional review studies specifically designed to assess these questions are necessary in order to add any substantial weight to these hypotheses.	<ul style="list-style-type: none"> <li>- Academic institutions, including researchers, universities, and journals, produce mostly weak and/or overstated evidence.</li> <li>- Media institutions systematically misreport and overstate findings and/or select low strength studies on which to report.</li> <li>- Social media and the public systematically select and share misreported, exaggerated, and/or low strength of causal inference findings</li> </ul>
<a href="https://doi.org/10.1371/journal.pone.0196346.t003">https://doi.org/10.1371/journal.pone.0196346.t003</a>	