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When Evidence Backfires: Scientific Messages May Lead Audiences to Believe The Opposite

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Abstract

This research examined how scientific findings shaped the beliefs of individuals who felt personally connected to the topic under investigation. We focused on the longstanding debate over whether violent video games increased aggressive behavior. It was predicted that people with little or no involvement in violent video game play would be more open to updating their beliefs in response to new evidence, whereas frequent players would be less inclined to shift their views. Participants read research abstracts summarizing either a positive association between violent video games and aggression or a null effect, and their beliefs were measured before and after reading. Across two studies (total N = 1,576), participants with low exposure to violent video games updated their beliefs in both conditions, adjusting their views to match the abstract's conclusion. In contrast, individuals with high exposure to violent video games largely maintained their prior belief that such games did not increase aggression, regardless of the evidence presented. Among the heaviest players, exposure to evidence of a harmful effect produced a counter-directional shift, leading them to believe that violent video games reduced aggression. This pattern was consistent with psychological distancing, a defensive process in which individuals moved their beliefs away from information perceived as threatening to their identity, preferences, or behavior. These findings highlight the need for strategies that reduce defensiveness when scientific findings are presented to the public.

Keywords: Science Communication; Aggression; Video games