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TITLE:

Understanding and Optimizing Message Matching Interventions: A Review and Meta-Analysis of 604 Randomized Controlled Trials

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ABSTRACT:

Message matching is a persuasive technique whereby features of message-based interventions are altered to be congruent with the characteristics of their audience (e.g., by considering people's backgrounds or beliefs). In behavioral medicine, two forms of the technique have been widely reviewed. The first is message tailoring, and focuses on matching messages to measured individual differences such as demographic or belief-based variables (such as proposed by the Health Belief Model or the Reasoned Action Approach). The second form is message framing, and focuses on determining when gain- and loss-framed messages are each most effective. Despite the popularity of these techniques, the average effects associated to message tailoring/framing has been relatively small (r < .10) and variable. It is unclear when and how to best use matching techniques, and whether other form of matching interventions may be more effective. To address these issues, we present findings from a large registered (PROSPERO CRD42019116688; osf.io/rpjdg) systematic review and meta-analysis that synthesizes findings from 604 randomized controlled trials (covering 4,228 effect size estimates) pulled from across the behavioural sciences. Through this meta-analysis, we synthesize additional types of message matching effects that have yet to be comprehensively reviewed. Specifically, we focus on functional message matching effects, which emphasize matching to people's dominant motivational orientations. Such orientations can either occur naturally between people—such as when matching to chronic individual differences in people's personal values—or they can be induced experimentally—such as by using psychological priming procedures to make certain motives more contextually salient than others. We find the average effect of functional message matching interventions to be around r = .20, which is considerably larger than the average effect established in either message tailoring or message framing research. Further, these effects are robust across a wide range of study conditions, and appear effective in changing a wide variety of behaviors both within and outside the health behavior domain. These findings suggest that functional message matching strategies may be a highly useful tool for interventionists to consider when building interventions to encourage healthier behaviors.

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