Abstract

Mass media can powerfully affect health decision-making, however the results of health campaigns vary. Converging evidence demonstrates that neural activity within brain systems associated with self-related processing can predict individual behavior in response to health messages. Preliminary evidence also suggests that neural activity in small groups can forecast population level campaign outcomes. No studies have investigated the psychological processes that underpin the link between neural activity and population level outcomes, or how these predictions are affected by message content. The current investigation: 1) demonstrates that neural activity predicts population level responses to an anti-smoking campaign above and beyond self-report data; 2) demonstrates that activity within independently-localized self-related processing regions during health message exposure predicts population level campaign responses; and 3) demonstrates this relationship depends on message content—self-related neural processing predicts outcomes in response to strong negative arguments against smoking and not in response to compositionally similar neutral images.