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SELF-DETERMINATION THEORY INTERVENTIONS IN THE HEALTH DOMAIN: A META-ANALYSIS

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Ng et al. (2012) meta-analysis of applications of self-determination theory (SDT; Ryan & Deci, 2017) in the health domain included many non-experimental studies. A more recent meta-analysis by Gillison et al. (2019) of intervention studies in this area did not calculate changes in indices of physical or mental health. Advancing the SDT literature in the health domain, we present a meta-analysis of experimental studies that tested changes in at least one SDT variable and at least one health-behavior, physical-health outcome, or psychological health outcome.

73 studies (N=30,088) met our inclusion criteria and provided sufficient data for the purposes of the review. The behaviour change techniques (BCTs) and SDT-based need supportive techniques used in the studies were also coded. Risk of bias was assessed using an adapted version of the Cochrane Risk of Bias Tool. To test whether changes in SDT-related constructs engender changes in other SDT-related constructs, health behavior, physical health and psychological health, a set of meta-regressions were conducted. Sensitivity analyses were applied to examine the robustness of the synthesized results by removing outliers and by examining whether any of the BCTs were associated with the effect sizes from individual studies.

A random-effects meta-analytic model (using Stata, v. 15) showed that the interventions produced small-to-medium changes in most SDT constructs at the end of the intervention period, and in health behaviors at the end of the intervention period and at the follow-up. Small positive changes in physical and psychological health outcomes were also observed at the end of the interventions. Increases in need support and autonomous motivation (but not controlled motivation or amotivation) were associated with positive changes in health behavior.

Interventions in the health domain based on SDT produce modest (in the region of $g = .30$ to $.60$) but sustained increases in health behaviors and improvements in physical health, and short-term changes in psychological health. These effects are partly due to increases in self-endorsed motivation for change and support from social agents.

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