

# Our observation....

- "Averaging high-quality and low-quality studies to show a positive ROI, as Baxter (a graduate student at the University of Tasmania) has done in this meta-analysis, is invalid on its face. It would be like averaging Ptolemy and Copernicus to conclude that the earth revolves halfway around the sun."

**Results.** Fifty-one studies (61 intervention arms) published between 1984 and 2012 included 261,901 participants and 122,242 controls from nine industry types across 12 countries. Methodological quality scores were highly correlated between checklists ( $r = .84-.93$ ). Methodological quality improved over time. Overall weighted ROI [mean  $\pm$  standard deviation (confidence interval)] was  $1.38 \pm 1.97$  (1.38–1.39), which indicated a 138% return on investment. When accounting for methodological quality, an inverse relationship to ROI was found. High-quality studies ( $n = 18$ ) had a smaller mean ROI,  $0.26 \pm 1.74$  (.23–.30), compared to moderate ( $n = 16$ )  $0.90 \pm 1.25$  (.90–.91) and low-quality ( $n = 27$ )  $2.32 \pm 2.14$  (2.30–2.33) studies. Randomized control trials (RCTs) ( $n = 12$ ) exhibited negative ROI,  $-0.22 \pm 2.41$  (-.27 to -.16).

Full citation: Siyan Baxter, Kristy Sanderson, Alison J. Venn, C. Leigh Blizzard, and Andrew J. Palmer (2014) The Relationship Between Return on Investment and Quality of Study Methodology in Workplace Health Promotion Programs. American Journal of Health Promotion: July/August 2014, Vol. 28, No. 6, pp. 347-363.