

# Therapist-supported Internet-based cognitive behaviour therapy yields similar effects as face-to-face therapy for psychiatric and somatic disorders: an updated systematic review and meta-analysis

Erik Hedman-Lagerlöf<sup>1</sup>, Per Carlbring<sup>2</sup>, Frank Svärdman<sup>1</sup>, Heleen Riper<sup>3,4</sup>, Pim Cuijpers<sup>3</sup>, Gerhard Andersson<sup>1,5</sup>

<sup>1</sup>Department of Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden; <sup>2</sup>Department of Psychology, Stockholm University, Stockholm, Sweden; <sup>3</sup>Department of Clinical Neuro- and Developmental Psychology, Vrije Universiteit Amsterdam, Amsterdam, The Netherlands; <sup>4</sup>Department of Psychiatry, Amsterdam Public Health Research Institute, Amsterdam University Medical Center, Amsterdam, The Netherlands; <sup>5</sup>Department of Behavioural Sciences and Learning, and Department of Biomedical and Clinical Sciences, Linköping University, Linköping, Sweden

*Providing therapist-guided cognitive behaviour therapy via the Internet (ICBT) has advantages, but a central research question is to what extent similar clinical effects can be obtained as with gold-standard face-to-face cognitive behaviour therapy (CBT). In a previous meta-analysis published in this journal, which was updated in 2018, we found evidence that the pooled effects for the two formats were equivalent in the treatment of psychiatric and somatic disorders, but the number of published randomized trials was relatively low (n=20). As this is a field that moves rapidly, the aim of the current study was to conduct an update of our systematic review and meta-analysis of the clinical effects of ICBT vs. face-to-face CBT for psychiatric and somatic disorders in adults. We searched the PubMed database for relevant studies published from 2016 to 2022. The main inclusion criteria were that studies had to compare ICBT to face-to-face CBT using a randomized controlled design and targeting adult populations. Quality assessment was made using the Cochrane risk of bias criteria (Version 1), and the main outcome estimate was the pooled standardized effect size (Hedges' g) using a random effects model. We screened 5,601 records and included 11 new randomized trials, adding them to the 20 previously identified ones (total n=31). Sixteen different clinical conditions were targeted in the included studies. Half of the trials were in the fields of depression/depressive symptoms or some form of anxiety disorder. The pooled effect size across all disorders was  $g=0.02$  (95% CI:  $-0.09$  to  $0.14$ ) and the quality of the included studies was acceptable. This meta-analysis further supports the notion that therapist-supported ICBT yields similar effects as face-to-face CBT.*

**Key words:** Cognitive behaviour therapy, Internet-based cognitive-behaviour therapy, face-to-face therapy, depression, anxiety disorders, on-line psychotherapy, meta-analysis

(*World Psychiatry* 2023;22:305-314)