

# Long-Term Effects Of Psychosocial Interventions For Adolescents On Depression And Anxiety: A Systematic Review And Meta-Analysis

Denis Duagi, Ben Carter, Maria Farrelly, Stephen Lisk, June S.L. Brown

**Background:** Adolescence represents a distinctive phase of development, and variables linked to this developmental period could affect the efficiency of prevention and treatment for depression and anxiety, as well as the long-term prognosis. The objectives of this study were to investigate the long-term effectiveness of psychosocial interventions for adolescents on depression and anxiety symptoms and to assess the influence of different intervention parameters on the long-term effects.

**Methods:** Searches were carried out 11<sup>th</sup> of August 2022 using five databases (Cochrane Library, Embase, Medline, PsychInfo, Web of Science), as well as trial registers. Randomized controlled trials of psychosocial interventions targeting specifically adolescents were included if they assessed outcomes at 1-year post-intervention or more. The Cochrane risk of bias-2 quality assessment tool was used. The primary outcome was depression and studies were pooled using a standardised mean difference, with associated 95% confidence interval, p-value and  $I^2$ . The study protocol was pre-registered (CRD42022348668).

**Findings:** A total of 57 reports (n= 46,678 participants) were included in the review. Psychosocial interventions led to small reductions in depressive symptoms, with standardised mean difference (SMD) at 1-year of -0.08 (95%CI -0.20, -0.03, p=0.002,  $I^2=72\%$ ), 18-months SMD=-0.12, 95% CI -0.22, -0.01, p=0.03,  $I^2=63\%$ ) and 2-years SMD=-0.12 (95% CI -0.20, -0.03, p=0.01,  $I^2=68\%$ ). Sub-group analyses indicated that targeted interventions produced stronger effects, particularly when delivered by trained mental health professionals (K=18, SMD=-0.24, 95% CI -0.38, -0.10, p=0.001,  $I^2=60\%$ ). No effects were detected for anxiety at any assessment.

**Conclusion:** Psychosocial interventions specifically targeting adolescents were shown to have small but positive effects on depression symptoms but not anxiety symptoms, which were sustained up to 2 years. These findings highlight the potential population-level preventive effects if such psychosocial interventions become widely implemented in accessible settings such as schools.