INPLASY

Interventions based on digital devices and technologies in reducing suicidal risk: a meta-analysis

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 July 2025 and was last updated on 18 July 2025.

INTRODUCTION

Review question / Objective The present meta-analysis aims to systematically examine existing suicide prevention interventions that utilize digital technologies , with a specific focus on their application and effectiveness within the adolescent population.

Condition being studied The meta-analysis refers to suicidal behaviour and self-harm in the adolescent population.

METHODS

Participant or population Adolescents (12-18).

Intervention Interventions (TIs) based on digital devices and technologies in reducing both suicidal behavior and non-suicidal self-injury among adolescents.

Comparator Not applicable.

Study designs to be included Randomized Control Trial.

Eligibility criteria Inclusion criterias : (1) studies focused on adolescents (13–18 years), (2) studies that evaluated suicide or self-harm interventions using digital technologies, (3) studies that reported quantitative outcomes related to suicidal ideation or behavior.
Exclusion criteria: (1) studies that did not include adolescents as the primary population, (2) studies that were reviews, editorials, or conference abstracts, (3) studies where only the protocol was presented, (4) studies were not interventions with technological devices.

Information sources EBSCO (APA PsycArticles, APA PsycInfo, MEDLINE, APA PsycTherapy, Psychology and Behavioral Sciences Collection) , PubMed, Cochrane, contact with authors.

Main outcome(s) The findings indicate that technology-assisted interventions yield an overall

statistically significant moderate effect in reducing suicidal ideation.

Quality assessment / Risk of bias analysis The quality of the studies included in this meta-analysis was assessed following Cochrane's guidelines for bias risk assessment. Key methodological features such as sample randomization, participant and researcher blinding, relevant drop-out rates, the use of validated scales, and protocol pre-registration were evaluated.

Strategy of data synthesis For the meta-analysis, three different models were developed: the first one for the assessment of the overall effect size of the studies; while in the second and third one, two moderators were added, respectively, the type of intervention (in terms of specific type of technology used) and the type of control (whether the control was exposed to treatment as usual [TAU] or other forms). The indexes that were considered were heterogeneity indexes (I^2, τ^2), as well as the coefficients of the considered moderators in the different models.

Subgroup analysis Not applicable.

Sensitivity analysis Not applicable.

Language restriction No.

Country(ies) involved Spain and Italy.

Keywords suicide prevention, suicide intervention, adolescents, digital devices, technology.

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