

# PREVENTION OF SUICIDAL BEHAVIOUR IN ADOLESCENTS: EMPIRICAL EVIDENCE AND THE DEVELOPMENT OF A DIGITAL INTERVENTION

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## INTRODUCTION

- ❖ More than 720,000 people take their own lives every year, with suicide being the third leading cause of death among 15- to 29-year-olds (World Health Organisation, 2025).
- ❖ This high prevalence among adolescents highlights the need to develop appropriate interventions that:
- ❖ Consider the specific processes that the literature has identified as potential mechanisms explaining suicidal behaviour.
- ❖ Consider the ways in which young people interact and communicate through new technologies, virtual platforms and digital tools. 25% of adolescents are constantly online, and over 90% do so on a daily basis (Lenhart A., 2015).

## META-ANALYSIS

### METHOD

#### 01. Literature review

A systematic search of EBSCO, PubMed and Cochrane up to May 2025.

#### 02. Inclusion criteria

Studies involving adolescents (aged 13–18), digital interventions and quantitative outcomes.

#### 03. Study selection

Two independent reviewers carried out the selection and resolved any discrepancies by consensus.

#### 04. Final analysis

Seven studies involving a total of 1,000 participants were included

## OBJECTIVES

- 1) To synthesize empirical evidence on the effects of technology-assisted interventions on adolescent suicidal behavior, considering digital integration and relevant moderating variables.
- 2) To design and validate an intervention based on digitalisation and ICT that addresses the specific mechanisms underlying suicidal behaviour in adolescents.

## KEY FINDINGS OF THE META-ANALYSIS

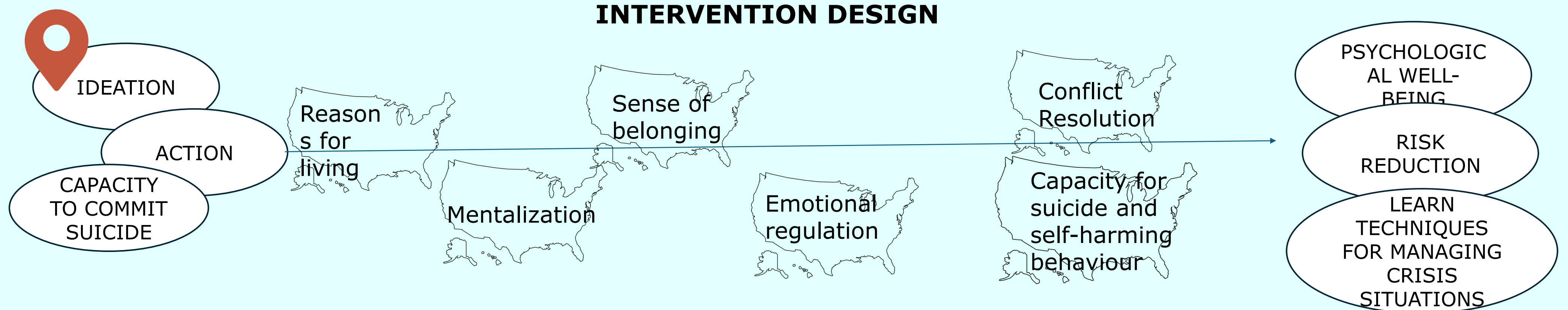
The meta-analysis showed that technology-based interventions have a globally significant moderate effect on reducing suicidal ideation in adolescents (SMD = 0.385,  $p = 0.024$ , 95% CI [0.071, 0.699]). Participants who received technology-assisted interventions experienced a greater reduction in suicidal ideation compared with control groups. However, substantial heterogeneity was observed between studies ( $Q(6) = 27.20$ ,  $p < 0.001$ ,  $I^2 = 69.77\%$ ), suggesting that nearly 70% of the variability is due to genuine differences between studies.

## METHOD OF INTERVENTION

### PARTICIPANTS

Participants will be adolescents aged between **12 and 17**. The project will be carried out in a group of secondary schools selected for this purpose. Participation will be voluntary, subject to prior consent, and participants will be selected according to pre-established inclusion and exclusion criteria and randomly assigned to the study or control group.

### INTERVENTION DESIGN



The intervention will be implemented with a mixed group (at-risk and non-at-risk adolescents). Self-harming behaviours and the target variables for the intervention will be assessed using a specific protocol before and after the intervention. The intervention will be delivered over 13 sessions in small groups of 15 adolescents. Ethical approval will be obtained from the corresponding institutional review board prior to data collection.

## EXPECTED OUTCOMES OF THE INTERVENTION

We expect this integrated intervention to result in a significant reduction in suicidal behaviour overall and an improvement in each intervention variable, both in pre- and post-intervention comparisons and in relation to the control group. Furthermore, given that the intervention focuses on both the individual and the family, we also expect an improvement in intra-family relationships. Finally, using technology and digital communication, the intervention will enable the validation of a new tool for monitoring and managing suicidal behaviour among adolescents, with a view to improving their psychological well-being.

## GENERAL CONCLUSIONS

Adolescence is a particularly vulnerable stage of life due to the many developmental and social changes it entails, which increase the risk of suicidal behaviour (Nock, 2008). In this regard, the results of the meta-analysis show that technology-assisted interventions have a moderate and statistically significant effect on reducing suicidal ideation in adolescents. Based on this empirical evidence, this proposed digital intervention aims to address suicide risk through detection, prevention and early intervention by means of a networked approach focused on strengthening protective factors such as emotional regulation, a sense of belonging and psychological well-being, both in adolescents and their families.

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