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Economic evaluations of individual, service, and training interventions for self-harm and suicide prevention: a systematic review

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Background

- Self-harm, defined as intentional self-poisoning or self-injury regardless of intent, affects over 15 million people worldwide annually.
- More than 700,000 die by suicide each year, contributing to over 32 million years of life lost globally.
- In the UK, self-harm leads to over 200,000 emergency presentations annually, with significant direct hospital costs and indirect societal costs.
- Individuals at risk often engage with healthcare services, offering opportunities for intervention. Various strategies—including cognitive behavioural therapy, integrated services, and staff training—have shown potential, though evidence quality varies.
- The most recent economic review in 2016 found mixed study quality, highlighting the need for updated evidence.

Objectives

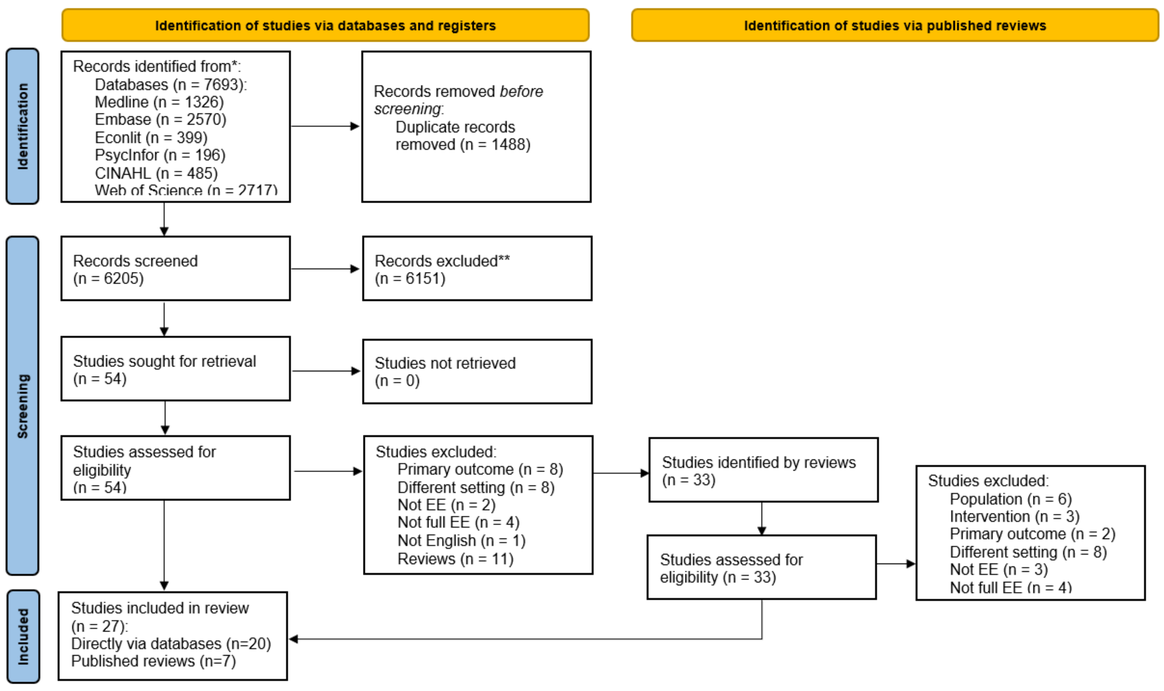
- Self-harm and suicide are public health priorities that necessitate effective and economically sustainable preventive strategies.
- Individual-level, service-level, and staff-training interventions have demonstrated effectiveness.
- We conducted a systematic review of economic evaluations of these interventions within healthcare settings.

Methods

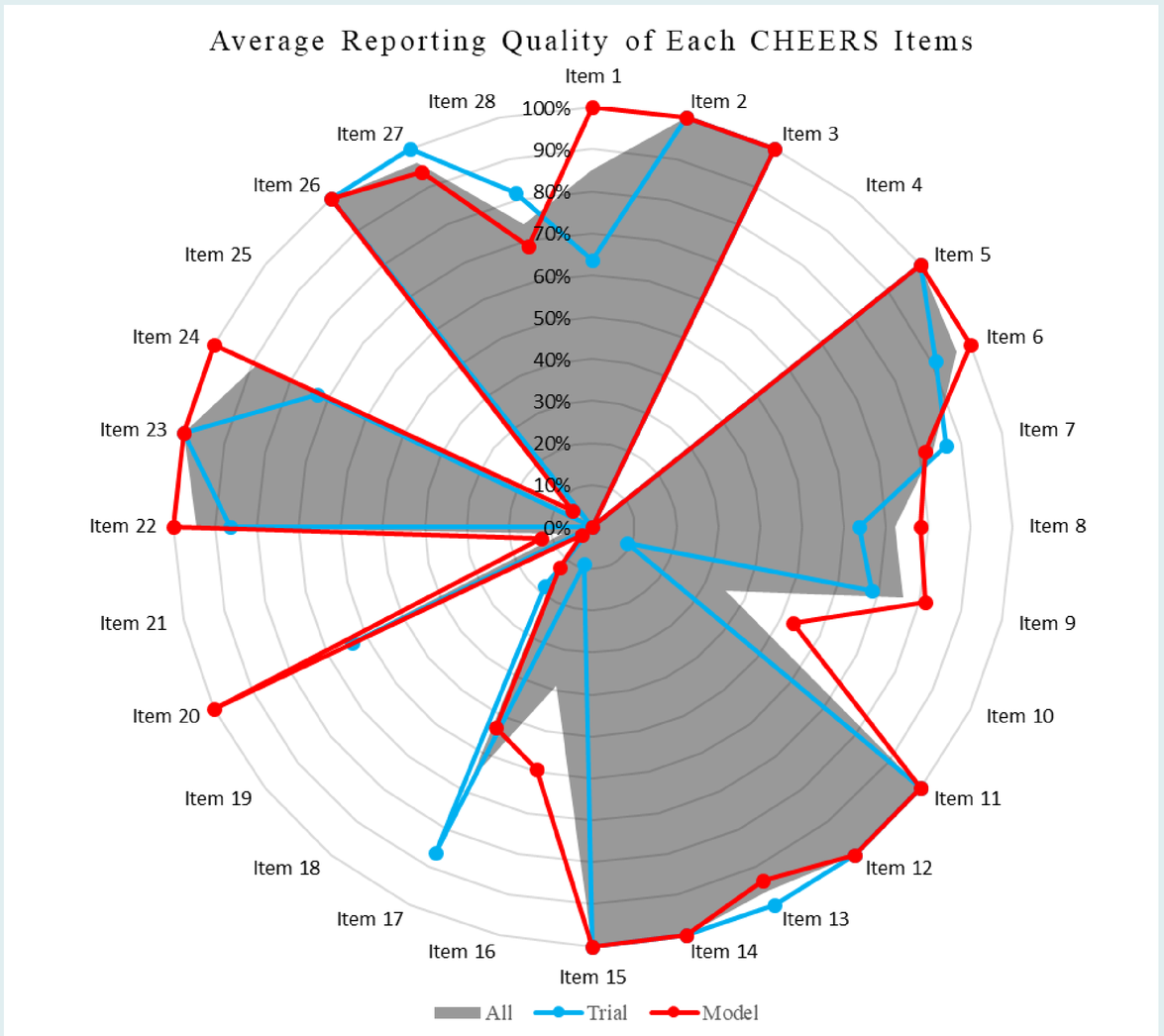
- A comprehensive search was conducted in databases (Medline, Embase, Econlit, CINAHL, Web of Science and PsycINFO) for full economic evaluations of service-level, individual-level and staff-training interventions targeting self-harm and suicide prevention in healthcare settings.
- Study time frame: January 2003 - November 2023
- Methodological and reporting quality were assessed using standard tools.

Results

- In total, 27 studies evaluating 27 individual-level, one staff-training, one service-level and four mixed interventions met the inclusion criteria.
- Over time, methods have moved from purely trial-based analyses (n=11) to include model-based analyses (n=16), of which 11 were Markov models.
- Outcomes ranged from cost per self-harm episode averted, cost per suicide averted to cost per extra quality-adjusted life-year (QALY).
- Sixteen studies included only healthcare sector costs.
- Study heterogeneity precluded meaningful direct comparison between studies.
- The results indicate a broad range (USD12,321-USD327,138 per QALY) of cost-effectiveness across different interventions.
- Study quality was generally good, with some limitations in model validity.



Results



Conclusion

- Most of the interventions studied demonstrated significant potential for cost savings and improved health outcomes.
- Variation in methods used underscores the need for standardized approaches in costing and outcome measurement.
- As the use of modelling expands in this area, further work is needed to develop more consensus in how to measure and model longer-term outcomes.

Next steps

- Adapt evidence from the review with stakeholder input and construct economic models to make the analysis relevant to the NHS.
- Address evidence gaps by constructing new economic models using published evidence and stakeholder input and summarise evidence for policymakers, commissioners and patients.
- Generate recommendations for implementation of interventions where the evidence is sufficiently robust, and recommendations for specific topic. requiring further research where there are still unmet needs

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