Nursing interventions of choice for the prevention and treatment of suicidal behaviour: The umbrella review protocol

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Abstract

Aim: To determine which interventions, from a nursing perspective, can be considered as the interventions of choice for the prevention and treatment of suicidal behaviour. In this way, the umbrella review attempts to identify nursing interventions from the Nursing Interventions Classification (NIC) taxonomy with evidence for this purpose.

Design: Descriptive study protocol.

Methods: This umbrella review will consist of an extensive, systematic search of published systematic reviews and meta-analyses of studies examining interventions of choice for the prevention and treatment of suicidal behaviour. A systematic search of papers indexed in PubMed, CINAHL, Cochrane Database of Systematic Reviews, Scopus, ISI Web of Knowledge and the Joanna Briggs Institute databases will be carried out; the results will be evaluated for inclusion by two independent reviewers. In addition, the bibliographic references of the included reviews will be searched. The assessment of the methodological quality of the included systematic reviews and meta-analyses, and data extraction, will be performed by two independent reviewers.

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Suicidal behaviour is determined by a complex interplay of factors that pose a risk for the development of lethal behaviour; protective factors that provide life-sustaining safety; and predisposing circumstances that may precipitate suicidal behaviour (Anseán, 2014). Therefore, professional intervention should be oriented towards the enhancement of protective factors (group cohesion, resilience and restriction of access to lethal methods) (Anseán, 2014); the eradication or control of risk factors (previous suicide attempts, existence of mental disorders and alcohol consumption) (World Health Organization, 2014); and the correct management of precipitating situations (worsening of illnesses, loss of loved ones and loneliness) (Anseán, 2014).

Nowadays, suicide is a public health issue for which prevention and treatment must be prioritized by politicians and in health programmes developed worldwide (World Health Organization, 2014). The Pan American Health Organization, PAHO (2017) estimates that almost 800,000 people commit suicide every year worldwide, and for every one of these suicides, it is estimated that there are 20 suicide attempts, so we can estimate that there are more than 16 million suicide attempts every year worldwide. Suicide attempts are repeated by 15–30% of patients in 1 year, and almost 2% end up committing suicide in 5–10 years of their initial suicide attempt (Cano et al., 2009); the initial suicide attempt is therefore the most relevant risk factor (World Health Organization, 2020).

Internationally, the countries with the highest suicide rates are Lithuania, South Korea and Slovenia; while Greece, Turkey and South Africa appear at the bottom of the list with rates below 4 deaths per 100,000 inhabitants (Spanish Foundation for Suicide Prevention, 2020). In Spain, more than 3,500 people commit suicide every year, and this has been on an upward trend since 2014 (National Institute of Statistics, 2020). The highest suicide rates per inhabitant and autonomous community are in Asturias, Galicia and Murcia; while Cantabria, Ceuta and Melilla have the lowest rates. Both nationally and internationally, hanging and jumping from a height are the most commonly selected methods (Spanish Foundation for suicide prevention, 2020).

A recent systematic review with meta-analysis aimed at evaluating the effect of suicide prevention interventions concludes that they are effective in preventing both completed suicide and suicide attempts. Among the interventions analysed were gatekeeper, health education, counselling, telephone follow-up and cognitive behavioural therapy (Hofstra et al., 2020).

Several published reviews aimed at studying interventions for the prevention and treatment of suicidal thoughts and behaviour point to the effectiveness of multilevel intervention in adults, with statistically significant results in reducing suicidal thoughts and repetition of behaviour (Briggs et al., 2019; Büscher et al., 2020; Gøtzsche et al., 2017; Larsen et al., 2016; Melia et al., 2020). Riblet et al. (2017), in a review of 78 studies, conclude that the WHO's brief contact intervention is a promising suicide prevention strategy; interventions, such as telephone follow-ups, training, group therapy, pharmacological administration of Lithium, education and counseling and cognitive behavioural therapy reduced deaths by suicide. Cognitive behavioural therapy is shown to be more effective compared with other treatments in reducing the risk of new suicide attempts (Gøtzsche et al., 2017; Lai et al., 2014). Several studies of this multilevel intervention point to cognitive behavioural therapy, individual and group support, brief contact, counselling, access to health services, support groups led by health professionals, education and information, mental health awareness, community awareness, coping support, stress management and symptom detection training as effective interventions (Hofstra et al., 2020; Lai et al., 2014). With this in mind, noting the effectiveness of brief professional-patient contact, Milner et al. (2015) report after a review of 12 articles that brief contact interventions were successful in reducing the frequency with which people reattempted self-harm; interventions such as telephone follow-ups or contact by post were analysed.

Several reviews, analysing the use of new technologies as a monitoring and contact tool, conclude that some applications provide elements of evidence-based best practice with significant preventive outcomes (Larsen et al., 2016); and that mobile technology, used in this area, has a positive impact on reducing depression, distress and self-harm by improving coping strategies (Melia et al., 2020).

In Spain, health intervention for those at risk of suicide is carried out by primary care teams, emergency units and specifically mental health network units (La Rioja Government, 2018). From these services, nurses develop specific interventions for these patients, such as cognitive behavioural therapy, problem-solving therapy, survivor interventions, interpersonal therapy, contact, medication...
administration, follow-up or crisis intervention techniques among others (Registered Nurses’ Association of Ontario, 2009). Such interventions by nursing professionals are generally well accepted by the patient due to the availability, accessibility and therapeutic nurse–patient relationship (Silva et al., 2018). Nursing activity in relation to intervention and prevention of suicidal behaviour is circumscribed in the ninth need described by Virginia Henderson in the Basic Needs nursing model, “avoidance of environmental hazards”, which includes assessment of the patient’s knowledge of environmental hazards and their corresponding prevention and intervention (Gallego et al., 2015; Henderson, 1965). Reference is made to the existence of the NANDA (North American Nursing Diagnosis Association) nursing diagnosis “Suicide Risk”, among other possible diagnoses, which is defined as the risk of life-threatening self-inflicted injury by the patient (NANDA International, 2019); it is of interest to determine which interventions, from a nursing perspective, can be considered to be of choice for the prevention and treatment of suicidal behaviour, and to identify nursing interventions from the Nursing Interventions Classification (NIC) taxonomy with evidence to this end (Butcher et al., 2019).

2 | OBJECTIVE

The aim of this umbrella review is to determine which interventions, from a nursing perspective, can be considered as the interventions of choice for the prevention and treatment of suicidal behaviour. In this way, the umbrella review attempts to identify nursing interventions from the Nursing Interventions Classification (NIC) taxonomy with evidence to this end (Butcher et al., 2019).

3 | METHODS AND ANALYSIS

To improve the quality of this protocol, the guidelines of the PRISMA-P checklist (see supplementary file 1) have been followed; the use of “Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols” has the potential to improve both the quality of the protocol and the execution of systematic reviews (Prady et al., 2008; Smidt et al., 2006; Turner et al., 2012). In line with these guidelines, this umbrella review protocol has been registered with the International Prospective Register of Systematic Reviews (PROSPERO) with registration number CRD42020221516. The procedure followed in this umbrella review is described in Figure 1.

3.1 | Patient and public involvement

Neither this protocol nor the subsequent development of the umbrella review requires the participation of patients or the general public.

3.2 | Search strategy

3.2.1 | Database search

A systematic search of papers indexed in the databases PubMed, CINAHL, Cochrane Database of Systematic Reviews, Scopus, ISI Web
of Knowledge and the Joanna Briggs Institute will be carried out. The results will be assessed for inclusion by two independent reviewers. In addition, the bibliographic references of the included reviews will be searched. The assessment of the methodological quality of the included systematic reviews and meta-analyses, and data extraction, is performed by two independent reviewers. Conflicts between reviewers will be resolved by an independent third reviewer.

3.2.2 | Search terms

A systematic search will be carried out based on the following keywords: Suicide, Attempted, Suicide, Suicidal Ideation, Primary Prevention, Secondary Prevention, Tertiary Prevention, Risks, Risk Assessment, Risk Factors, Risk Reduction Behaviour, and systematic review. They shall be combined by means of Boolean operators (AND and OR) and adapted to each database in a specific way. Supplementary file 2 shows the complete search string.

3.3 | Eligibility criteria

3.3.1 | Study design

This umbrella review will include systematic reviews and meta-analyses in adult humans (18 years and older) of both sexes.

3.4 | Inclusion and exclusion criteria

The following inclusion and exclusion criteria have been established:

- Full systematic reviews with or without meta-analysis describing the systematic search chain and study selection criteria.
- Systematic reviews and selected meta-analyses included in the umbrella review should examine studies in adult humans (18 years and older) of both sexes.
- The studies included must be published in Spanish or English, and be no more than 10 years old (depending on the date of publication).
- Selected systematic reviews and meta-analyses should examine health interventions for the prevention or treatment of suicidal behaviour, whether attempted or completed suicide.
- Reviews and meta-analyses of studies in the general population will be included, excluding studies based on specific populations (e.g. military personnel, war veterans, armed forces or prison populations).

3.5 | Study selection

The selection of systematic reviews and meta-analyses is carried out using Covidence software (Veritas Health Innovation, 2020). The initial search is carried out by one of the researchers, while duplicate elimination and the review of titles and abstracts to verify inclusion and exclusion criteria will be carried out by two independent reviewers. All studies selected by at least one of the reviewers will be retrieved in full text for further review. In the case of disagreement, the resolution of conflicts will be carried out by a third independent reviewer. Once conflicts have been resolved, the reference list of included studies will be reviewed manually to identify other publications that may meet the inclusion criteria.

3.6 | Data extraction

Systematic reviews, and included meta-analyses, will be independently analysed by two reviewers. One of the researchers in the study will develop a data extraction form, which will be used by the two independent reviewers to extract the information. Discrepancies in the extraction of information will be resolved by a third independent reviewer. The information extracted and collected in the data extraction form will include first author, year of publication, type of study, number of studies included, aim of the study, interventions for the prevention and treatment of suicidal behaviour, results and main conclusions. For meta-analyses, statistically significant levels will be extracted.

3.7 | Assessment of methodological quality

The assessment of the methodological quality of the included systematic reviews and meta-analyses will be carried out by two independent reviewers using the Joanna Briggs Institute tool “Critical Appraisal Checklist for Systematic Reviews and Research Syntheses” (Joanna Briggs Institute, 2020). Disputes will be resolved by a third independent reviewer. Assessing methodological quality will be included in the discussion of the results of the respective systematic and meta-analytical reviews.

4 | DISCUSSION

The umbrella review will provide a high-level methodological synthesis to identify the most effective interventions of choice for the treatment and prevention of suicidal behaviour. It will provide a joint and comprehensive view of therapeutic alternatives with a higher level of evidence, which can serve as a basis for the development of clinical intervention guidelines, specific suicide prevention plans, protocols and intervention procedures. It will provide healthcare professionals with evidence for decision-making in their daily practice. On the other hand, from a nursing perspective, the aim is to provide a consistent, evidence-based response to the NANDA nursing diagnosis “Suicide risk” (NANDA International, 2019). We will determine which of the interventions identified as being of choice in the review are included in the Nursing Interventions Classification (NIC)
and conferences.

The results will also be disseminated at international congresses.

STRENGTHS AND LIMITATIONS OF

To our knowledge, this is the first protocol for an umbrella review for publication in an international, peer-reviewed, open access journal. The results will also be disseminated at international congresses and conferences.

ETHICS AND DISSEMINATION

Formal Research Ethics Committee approval is not required for this umbrella review under Spanish law, as no primary data are collected and no patient intervention is involved. This review will be submitted for publication in an international, peer-reviewed, open access journal. The results will also be disseminated at international congresses and conferences.

STRENGTHS AND LIMITATIONS OF THIS STUDY

To our knowledge, this is the first protocol for an umbrella review of interventions for the prevention and intervention of patients at risk of suicide. A broad search strategy is used to ensure a comprehensive synthesis of systematic reviews and meta-analyses in this area. Search results will be assessed for inclusion by two independent reviewers, and data extraction. The methodological quality of the included systematic reviews and meta-analyses was assessed. The evaluation of data extraction and methodological quality will be carried out by two independent reviewers.

As this is an umbrella review, the quality of the results will depend on the quality and content of the systematic reviews and meta-analyses that are available.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

AUTHOR CONTRIBUTIONS

Conceptualization: Teresa Sufrate-Sorzano. Methodology: Teresa Sufrate-Sorzano and Ivan Santolalla-Arnedo. Investigation: Teresa Sufrate-Sorzano, María Elena Garrote-Cámara, A. and Roland Pastells- Peiró. Resources: Félix Rivera-Sanz and Carmen Amaia Ramírez Tórres. Data curation:Montserrat Gea Sanchez and Vicente Gea Caballero. Writing, original draft preparation. Teresa Sufrate-Sorzano, Beatriz Angulo-Nalda and Pablo del Pozo-Herce. Writing, review and editing: All authors Supervision: Ivan Santolalla Arnedo. Project administration: Ivan Santolalla Arnedo. All authors have read and agreed to the published version of the manuscript.

PATIENT CONSENT FOR PUBLICATION

Not required.

DATA AVAILABILITY STATEMENT

The data will be available upon contacting the corresponding authors.

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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher’s website.

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