Effects of medical crisis intervention on anxiety, depression, and posttraumatic stress symptoms: a meta-analysis

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CRD summary
This review assessed the effectiveness of medical crisis interventions in patients experiencing psychological symptoms following a traumatic event. The authors support the delivery of multi-session interventions by highly trained delivery agents in patients experiencing post-traumatic symptoms. Given concerns about the review methodology and the absence of any formal assessment of study validity, the reliability of the authors’ conclusions is unclear.

Authors' objectives
To assess the effects of post-trauma individual crisis interventions on medical patients.

Searching
MEDLINE, PsycINFO, CINAHL, Health Source: Academic/Nursing Edition and SciSearch were searched for publications in the English language.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) or quasi-experimental studies were eligible for inclusion.

Specific interventions included in the review
Studies involving an operationally defined crisis intervention (one to three emergency mental health contacts), within 1 month of a traumatic incident, were eligible for inclusion. The included studies used single or multiple component individual early psychiatric or crisis interventions. Components included emotional, practical and social support with or without follow-up and referral; emotional support and catharsis with or without education or resources/referral; supportive listening, memory structuring and social support; ‘psychological debriefing’, emotional expression, effective communication, competence and self-reliance; or psychoeducation and motivational enhancement.

Participants included in the review
The included studies identified adult medical patients who had experienced a single traumatic event, such as childbirth or miscarriage for women, a surgical or medical hospital procedure, a motor vehicle accident or other road trauma, or a violent crime, or were a relative of seriously injured or ill patients.

Outcomes assessed in the review
Studies were eligible for inclusion if they reported anxiety, depression and post-traumatic stress symptoms (defined as intrusive thoughts and re-experiencing symptoms). The included studies used a variety of measurement tools (details were reported).

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
The authors did not state that they assessed validity. However, studies were excluded if they were inaccurate, suggested bias, or identified significant pre-test differences between treatment conditions.

Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction. Data on each outcome were extracted, ultimately to calculate the mean effect size.

Methods of synthesis
How were the studies combined?
Overall effect sizes for each study were combined using Cohen's d.

How were differences between studies investigated?
Studies were grouped by intervention type (multiple or single intervention), delivery type (multiple or single session) and delivery agent level of training ('high' was defined as having received formal instruction from experts in the field of crisis intervention, in addition to demonstrating clinical competence with appropriate credentialing; 'low' was defined as having received study-specific training in which the agents received brief exposure to crisis intervention principles specific to the investigation).

Results of the review
Ten RCTs and one controlled trial were included in the review (n=1,677 (reported as 2,124); 837 received the intervention and 840 the control). Sample sizes ranged from 17 to 917 participants.

There was a significant overall moderate effect for medical crisis interventions (d=0.44). Four studies assessing anxiety and 7 studies assessing post-traumatic stress symptoms also reported significant moderate effect sizes (d=0.52 and d=0.57, respectively). The 5 studies assessing depression reported a slight effect (d=0.24).

Intervention type.
Both multiple and single component interventions reported significant moderate effects (d=0.45 and d=0.44, respectively). A comparison of intervention type on post-traumatic stress indicated a high effect size (d=0.62) for multiple component interventions and a moderate effect size (d=0.55) for single component interventions. The limited number of studies for anxiety and depression did not allow further analysis.

Delivery type.
The overall effect size for single session interventions was reported as slight (d=0.33), while multiple session interventions reported a significant moderate to high effect (d=0.60).

The effect of number of sessions on post-traumatic stress studies was high for multiple sessions (d=0.85) but slight for single session interventions (d=0.21). Such analyses could not be undertaken for anxiety and depression because of the limited number of studies within each group.

Delivery agent training.
Studies including highly trained agents reported a moderate effect size (d=0.57). By comparison, studies involving low trained agents reported a low effect size (d=0.29). Further analysis of psychological variables could not be undertaken because of the limited number of studies.

Authors' conclusions
The use of multi-session interventions in post-trauma patients experiencing post-traumatic symptoms is supported when delivered by highly trained delivery agents.

CRD commentary
The review question was clear, but certain inclusion criteria were broad and not always clearly defined. Relevant literature searches were conducted using electronic databases. However, since publications were restricted to those written in English, which might have introduced language bias, and there was no apparent search for unpublished material, potentially relevant papers might have been missed. No details were provided of the methods used to select studies and extract the data, thus the potential for reviewer error and bias cannot be ruled out. The absence of a validity assessment means that the reliability of the included studies and their subsequent synthesis is unclear, although studies were excluded if they suggested bias.

Potentially relevant participant characteristics and study details, such as intervention intensity and duration, were not
reported. The fact that interventions, outcomes and measurement tools differed between the studies, the synthesis of the results may not have been appropriate. Given concerns about the review methodology and the absence of any formal assessment of study validity, the reliability of the authors’ conclusions is unclear.

**Implications of the review for practice and research**

Practice: The authors stated that crisis interventions should include multiple sessions and include specialised training for clinicians providing such interventions.

Research: The authors stated that future research should assess other clinical and non-clinical outcomes, such as social and occupational level of functioning. Future studies should also evaluate the effectiveness of individual crisis interventions on patients who have experienced more than one traumatic event.

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