Behavioral treatments of suicidal behaviors: definitional obfuscation and treatment outcomes

Linehan M M

Authors' objectives
To review treatment studies aiming to reduce suicidal behaviour among suicidal individuals.

Searching
The studies were located by searching Psychological Abstracts, MEDLINE, and the archives of the Suicide Information and Education Centre (Calgary, AB, Canada). Unpublished dissertation research was excluded.

Study selection
Study designs of evaluations included in the review
Studies with random assignment, or a close approximation to randomisation, were eligible. Eighteen of the twenty studies randomly assigned participants to the experimental and control condition; the other two studies assigned participants in an alternating sequential fashion. Of the studies examining the effectiveness of counselling or psychotherapy, the briefest treatment was 8 days and the longest was 1 year.

Specific interventions included in the review
Treatment programmes aiming to reduce suicidal behaviour. To be included in the review, the treatment under investigation had to target suicidal behaviour directly and apply a treatment designed specifically to reduce suicide. There were 13 studies examining out-patient psychosocial interventions, 2 examining inpatient psychosocial interventions, 3 pharmacotherapy studies, and 2 studies with non-hospitalised high-risk individuals that did not involve in-patient contact. The treatment settings were extremely variable, e.g. 2 interventions involved no in-person contact, relying on letters or phone calls only, whereas 2 other studies were conducted wholly within psychiatric settings.

Participants included in the review
The participants had to be suicidal. Eighteen studies included participants selected for study following a parasuicide episode and two studies included participants following assessment of high risk for suicide. A number of studies had age restrictions on the participants (either greater than 15, greater than 16, or greater than 17 years).

Outcomes assessed in the review
The outcomes were parasuicide and suicide. Parasuicide is a heterogeneous category that includes self-injurious behaviour with an intent to die (a suicide attempt), as well as behaviour without an intent to die (e.g. putting out a cigarette on one's arm with no intent of dying).

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

Assessment of study quality
The author does not state that they assessed validity.

Data extraction
The author does not state how the data were extracted for the review, or how many of the reviewers performed the data extraction.
Methods of synthesis
How were the studies combined?
The studies were combined narratively.

How were differences between studies investigated?
The author compared the effectiveness of interventions in 13 trials which excluded or included individuals at high risk from suicide.

Results of the review
Twenty studies were discussed. The total number of participants was not stated.

Eight studies examined whether or not some type of additional or more intensive clinical outreach added on to treatment as usual would decrease the probability of subsequent parasuicide and suicide, for example, brief admission to an in-patient unit, home visits, letters and/or phone calls, or a simple card with an emergency phone number. Two studies showed a significant reduction in parasuicide acts by follow-up (4.8 versus 15.8%; 7.7 versus 13.9%) and a third found a significant reduction in parasuicide acts and suicide threats combined (4.9 versus 13.5%). The 5 remaining studies found no difference between the experimental and control groups.

Five studies examined the effectiveness of focused out-patient psychotherapy or counselling offered by mental health professionals, compared with referral to out-patient psychotherapy or to one's primary care physician (where follow-through on the referral often did not occur). Three of the 5 studies found lower rates of parasuicide among those receiving the experimental treatments (26.3 versus 60%; 0 versus 37.5%; 4.8 versus 15.8%). The remaining 2 studies found no differences between the two groups.

One study looked at who offered the treatment and found no differences between continuing out-patient care with the treating in-patient psychiatrist and out-patient referral to a suicide prevention centre.

Three pharmacotherapy studies examined the efficacy of antidepressants or neuroleptics. Antidepressants were not effective, but results in the neuroleptic study showed a big decrease in parasuicidal acts (21 versus 75%). Two in-patient studies found that adding an experimental treatment to the usual in-patient treatment regime did not provide any additional benefit in the subsequent suicide and parasuicide rates.

Sensitivity analysis: in each of the 6 studies that excluded individuals at high risk for suicide, no significant differences were found between the experimental treatments and treatment as usual. On the other hand, 6 of the 7 out-patient studies that included individuals at high risk of suicide did show a significant beneficial effect of the experimental treatment under study.

Authors’ conclusions
The most important conclusion that can be drawn from this review of treatment studies is that we do not appear to know how to reduce the incidence of death by suicide among individuals going for help with suicidal behaviour, or disorders associated with suicidal behaviour. However, we know more about how to reduce the incidence of suicide attempts and other parasuicidal acts. When high-risk parasuicidal individuals are not excluded from the population being treated, focused behavioural interventions appear promising.

The most compelling conclusion that can be drawn from this review is that the treatment of suicidal behaviour appears to be an exceptionally low priority within the clinical research community. They were excluded in 45% of the studies aimed directly at treating suicidal behaviour.

CRD commentary
The review focused on a well-defined question. The inclusion criteria were clearly stated. The studies were summarised appropriately. A reasonable effort was made to search for all the relevant literature. However, the dates over which the search was conducted, and the search terms used, were not stated. The author did not include unpublished material, leading to a possible publication bias. Some details of the included studies were included, but it would have been useful.
if the author had also stated the number of participants in each study, and the age and gender of the participants. The validity of the included studies was not assessed, but the author did discuss study quality when interpreting the results.

The results of this review should be viewed with caution due to the variable quality of the studies, focus of treatment and pre-treatment conditions. The author's conclusions follow logically from the results.

**Implications of the review for practice and research**
The author states that future research should include individuals at high risk for suicide in clinical trials. She also suggests that we must increase the interest of well-trained clinical scientists in the field of suicide, and increase the number of young investigators interested, willing, and trained to develop treatments explicitly targeting suicidal behaviours.

**Funding**
National Institute on Mental Health (Bethesda), grant number MH34486.

**Bibliographic details**

**PubMedID**
9616806

**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
Behavior Therapy; Humans; Prevalence; Randomized Controlled Trials as Topic; Self-Injurious Behavior /epidemiology /therapy; Suicide /prevention & control; Terminology as Topic; Treatment Outcome

**AccessionNumber**
11998003585

**Date bibliographic record published**
31/10/1999

**Date abstract record published**
31/10/1999

**Record Status**
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.