TITLE: Critical Incident Stress Debriefing for First Responders: A Review of the Clinical Benefit and Harm

DATE: 12 February 2010

CONTEXT AND POLICY ISSUES:

Critical incident stress debriefing (CISD) is one component of the critical incident stress management (CISM) programs, which was designed in support of emergency personnel or other populations exposed to traumatic experiences.\(^1\) The term psychological debriefing (PD) is used interchangeably with CISD, which is a structured form of group crisis intervention, comprised of seven stages used within the first two weeks following a crisis incidence.\(^2\) PD is not a form of counseling or psychotherapy to prevent the development of post-traumatic stress disorder (PTSD), but its objective is to provide education and facilitate early help seeking, normal recovery, and personal growth.\(^2\) Although most people who received debriefing perceived it to be helpful,\(^3,4\) there remains a prolonged debate concerning the effectiveness and efficacy of CISD.\(^5,6\) Collective evidence even suggests that debriefing could impede natural recovery from acute PTSD symptoms.\(^7\)

This report presents the evidence within the last five years for the clinical benefit and harm of CISD given to first responders who have been exposed to a traumatic incident.

RESEARCH QUESTION:

What is the evidence for the clinical benefit and harm of critical incident stress debriefing for first responders?

METHODS:

A limited literature search was conducted on key health technology assessment resources, including PubMed, OVID’s Medline, Embase, PsycINFO, the Cochrane Library (Issue 3, 2009), University of York Centre for Reviews and Dissemination (CRD) databases, ECRI, EuroScan, international health technology agencies, and a focused Internet search. The search was limited to English language articles published between 2005 and January 2010. No filters were applied to limit the retrieval by study type.
SUMMARY OF FINDINGS:

Two randomized controlled trials (RCTs) in US soldiers and peacekeepers were identified. No studies were identified for the use of CISD in first-responders, such as police officers. No health technology assessments, systematic reviews and meta-analyses, controlled clinical trials, or observational studies addressing the research question were found.

Randomized controlled trials

The characteristics and results of the RCTs are presented in Appendix 1.

Adler et al. (2009) assessed Battlemind psychological debriefing efficacy following year-long deployment of US soldiers to Iraq. This was a four-arm parallel RCT, where 2,297 US soldiers (mostly male) returning from a 12-month combat deployment to Iraq were randomly assigned to one of the four groups: stress education, Battlemind debriefing, small group Battlemind training, and large group Battlemind training. Battlemind debriefing is a type of PD used in the U.S. military. It has similarities to civilian models such as CISD. Battlemind training takes a cognitive and skill-based approach to educating military personnel about post-deployment transition. It emphasizes safety, relationships, and common physical, social, and psychological reactions to combat. Stress education was given in PowerPoint slides, identifying normal responses during post-deployment, mental health symptoms, positive coping behaviours, and reactions that leaders should watch for in their unit members. Stress education was conducted in groups of 51-257 individuals for 40-50 minutes. Battlemind debriefing was similar to most group psychological debriefing models, consisting of seven phases and the median duration of the 26 sessions was 50 minutes. Battlemind training had a median duration of 39 minutes given to either large groups (126-225) or small groups (15-45) of soldiers. The 23 small Battlemind training sessions and the 6 large Battlemind training sessions used PowerPoint slides and discussion. Distress levels were assessed before and after interventions using the Subjective Units of Distress (SUDS) ratings. Outcomes at 4-month follow-up included PTSD (using the Posttraumatic Stress Disorder checklist; PCL scale), depression (using the Patient Health Questionnaire for Depression; PHQ-D), sleep problems (5-point scale), acceptability, perception of training, training utility, goals and atmosphere (5-point scale), and stigma associated with seeking mental health treatment (5-point scale). About 54% participants did not complete follow-up survey.

There was no evidence of change in term of distress levels immediately before and after the interventions, and no differences between groups. At 4-month follow-up, all three Battlemind interventions had lower PTSD symptoms, depression symptoms, and sleep problems than stress education for high levels of combat exposure only. There were no significant differences between groups for low levels of combat exposure. All Battlemind conditions received high ratings (immediate postraining perceptions of training) compared to stress education. There were no significant differences between groups for stigma associated with seeking mental health. The authors concluded that participants reporting high levels of combat exposure benefited from Battlemind debriefing and Battlemind training.

Adler et al. (2008) published another RCT that compared CISD with a stress management class (SMC) and a no-intervention comparison arm (survey-only; SO) for US peacekeepers deployed to Kosovo. This was a three-arm open parallel RCT of 952 soldiers, mostly male. The CISD was conducted by trained personnel and there were 13 sessions, each lasting an average
of 88.1 ± 25.2 minutes. The SMC was a combination of didactic instruction and group discussion, lasting about 63.7 ± 22.0 minutes per session. The no-intervention, SO, group received repeated survey administration only. Follow-up surveys were conducted for three periods (T2, T3, T4), following the pre-intervention (T1) survey. T2 occurred during the last month of deployment (October and November of 2002), T3 occurred 3-4 months following redeployment (January and February 2003) and T4 occurred 8-9 months following redeployment (September to November 2003). At the end of the study, 676 (71%) participants did not complete follow-up survey. The outcome variables included PTSD (using the PCL scale), depression (using the Center for Epidemiological Studies – Depression scale, CES-D), aggressive behaviors (using the Conflict Tactics Scale, CTS), alcohol consumption (using the Alcohol Users Disorder Identification Test, AUDIT), perception toward organizational support (using the Perceived Organizational Support scale, POS), and subjective evaluation of intervention (using the Subjective Units of Distress Scale, SUDS). The data were collected solely based on self-report, because, as stated by the authors, clinical interviews were not feasible given the sample size and difficulties working with operational units.

There were no significant differences between groups for PCL, CES-D, CTS, and POS variables at all time points. Soldiers in the CISD group evaluated the intervention more positively than those in the other two groups. For the subgroup of soldiers with highest exposure to mission stressors, the CISD condition slightly improved PCL, CTS, and POS scores, but also had slightly higher AUDIT scores than the other two conditions. Soldiers reported that they liked CISD more than the SMC. The authors concluded that, overall, CISD has no clear positive effects, but it has no strong negative effects either.

Limitations

The evidence was limited due to the study populations and design. In both RCTs, there was potential bias in reporting since it relied on the self-report measures instead of clinical interview. In addition, there was no true control, loss of follow-up was relatively high, and the effects of interventions were small. The participants in the second RCT were peacekeepers who might be exposed to relatively low stressors; and, in fact, many soldiers in that study did not need secondary prevention.

CONCLUSIONS AND IMPLICATIONS FOR DECISION OR POLICY MAKING:

Two RCTs were identified that compared CISD to other interventions in US soldiers and peacekeepers. No studies were found examining CISD for first responders such as police officers. Evidence from the identified RCTs indicated that CISD has no clear positive or negative effects compared to the other interventions although it received positive evaluation. One study expressed concern that CISD might have long-term negative impacts such as alcohol problems or higher distress level when provided to individuals exposed to higher stressors. Both studies suggested that CISD groups who were exposed to higher levels of combat exposure showed improvement in PTSD, depressive, and sleep symptoms than control, but no difference was reported with lower levels of exposure. Given the prolonged controversy and debate concerning the efficacy of CISD, the current limited evidence does not permit conclusions regarding its benefit and harm.
REFERENCES:


### Appendix 1: Characteristics and Results of the RCTs

<table>
<thead>
<tr>
<th>Study / Objectives</th>
<th>Interventions, comparators / Duration</th>
<th>Population</th>
<th>Effectiveness</th>
<th>Subjective evaluation</th>
<th>Adverse Effects</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adler et al.; 2009</td>
<td>Battlemind psychological debriefing (BPD): group size 20-33; median duration 50 min; 7 phases; Small group Battlemind training (SBT): group size 15-45; median duration 39 min; Large group Battlemind training (LBT): group size 126-225; median duration 39 min; Stress education (SE): group size 51-257; duration 40-50 min</td>
<td>US soldiers returning from a 12-month combat deployment to Iraq</td>
<td>Immediate post-intervention response</td>
<td>Immediate post-intervention response</td>
<td>No adverse events associated with Battlemind debriefing or Battlemind training</td>
<td>Participants reporting high levels of combat exposure benefit from Battlemind debriefing and Battlemind training</td>
</tr>
<tr>
<td></td>
<td>Battlemind psychological debriefing (BPD): group size 20-33; median duration 50 min; 7 phases</td>
<td></td>
<td>Distress (used Subjective Units of Distress; SUDS): no differences before and after intervention or between groups</td>
<td>Acceptability, perception of training, training utility, goals and atmosphere (5-point scale): more positive for Battlemind conditions than SE; higher ratings for SBT than LBT</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Battlemind psychological debriefing (BPD): group size 20-33; median duration 50 min; 7 phases</td>
<td></td>
<td>Follow-up</td>
<td></td>
<td>Stigma associated with seeking mental health (5-point scale): no significant differences between groups; LBT had lower stigma levels than SE at high levels of combat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Battlemind psychological debriefing (BPD): group size 20-33; median duration 50 min; 7 phases</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Battlemind psychological debriefing (BPD): group size 20-33; median duration 50 min; 7 phases</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study / Objectives</td>
<td>Interventions, comparators / Duration</td>
<td>Population</td>
<td>Effectiveness</td>
<td>Subjective evaluation</td>
<td>Adverse Effects</td>
<td>Conclusion</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------------------------</td>
<td>------------</td>
<td>--------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>------------</td>
</tr>
<tr>
<td>Adler et al.; 2008; three-arm open parallel RCT</td>
<td>CISD: conducted by trained personnel (mental health officers, mental health specialists); procedures of Everly &amp; Michell; audio tape recorded; sessions between 48 to 148 minutes long SMC: combination of didactic instruction and group discussion; sessions between 44 to 110 minutes long SO: repeated survey administrations only</td>
<td>US Army peacekeepers deployed to Kosovo Pre-intervention: 952 (312 CISD; 359 SMC; 281 SO) 1st Post-Deployment: 614 (203 CISD; 232 SMC; 179 SO); lost 338 2nd Post-Deployment: 276 (75 CISD; 122 SMC; 79 SO); total lost 676</td>
<td>differences between groups for low levels of combat exposure Overall PTSD (used 17-item PCL checklist): no differences between groups Depression (used CES-D scale): no differences between groups Aggression (used CTS): no difference between groups Perceived organizational support (used POS scale): no difference between groups Alcohol (used AUDIT): CISD slightly higher scores than the other two arms, but not significant Exposure to mission stressors and PTE: CISD slightly improved PCL</td>
<td>More positive evaluation about the training for CISD than SMC</td>
<td>No adverse events associated with any of the interventions</td>
<td>Soldiers reported that they preferred CISD more than the other two interventions although there were no significant differences in the outcome measures between groups. For soldiers exposed to potentially traumatizing events, CISD slightly improved PTSD, aggression, and perceived organizational support, but more alcohol problems.</td>
</tr>
<tr>
<td>Study / Objectives</td>
<td>Interventions, comparators / Duration</td>
<td>Population</td>
<td>Effectiveness</td>
<td>Subjective evaluation</td>
<td>Adverse Effects</td>
<td>Conclusion</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------------------------</td>
<td>------------</td>
<td>--------------</td>
<td>------------------------</td>
<td>----------------</td>
<td>------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>scores, improved CTS scores, higher POS, and slightly higher AUDIT scores relative to other two arms</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AUDIT: Alcohol Users Disorder Identification; BPD: Battlemind psychological debriefing; CES-D: Center for Epidemiological Studies-Depression scale; CISD: critical incidence stress debriefing; CTS: Conflict Tactics Scale; LBT: large Battlemind training; PCL: Posttraumatic stress Disorder Checklist; POS: Perceived organizational support; PTE: potentially traumatizing events; PTSD: post-traumatic stress disorder; RCT: randomized controlled trial; SBT: small Battlemind training; SE: stress education; SMC: stress management class; SO: survey-only; SUDS: Subjective Units of Distress