

# Best Evidence Summaries of Topics in Mental Healthcare

**BEST** *in* **MH** *clinical question-answering service*

## Question

In adults who have suffered an injury/accident, which group interventions are effective in reliving trauma symptoms?

## Clarification of question using *PICO* structure

*Patients:* Adults who have suffered an injury/accident

*Intervention:* Any group intervention

*Comparator:* Any other intervention

*Outcome:* Improving trauma symptoms

## Plain language summary

The summary found little evidence for group interventions for treating trauma symptoms resulting after injury or accident. One small study found that group cognitive behavioural therapy is effective in reducing symptoms of post-traumatic stress disorder but more research should be done to understand more.

**Clinical and research implications**

Evidence from one small randomised controlled trial, with substantial methodological weaknesses, indicates that group cognitive behavioural therapy may be useful in reducing symptoms of post-traumatic stress disorder, but appears to have no effect on related depression and anxiety. However, as noted by the study authors, these findings should be treated as preliminary and requiring confirmation by further research.

In addition this study included only patients who had experienced trauma related to serious motor vehicle accidents and findings may, therefore, not be generalisable to other types of trauma.

**What does the evidence say?*****Number of included studies/reviews (number of participants)***

We identified one randomised controlled trial (RCT), which was considered relevant to this evidence summary. The trial examined the effectiveness of a group CBT intervention, compared to a minimal contact control, for the treatment of people with post-traumatic stress disorder (PTSD) related to a serious motor vehicle accident. The study outcome measures assessed PTSD symptoms, PTSD diagnosis, depression and anxiety symptoms and diagnoses, physical functioning, and pain intensity and were assessed post-treatment and at three months follow-up.

***Main findings***

Participants in the group CBT group, who completed treatment, showed significantly greater reductions in clinician-assessed PTSD symptoms than those in the control group (effect size 0.84, large), however, the group effect was less at three month follow-up (effect size 0.35, small to medium). A similar pattern was seen for physical functioning, as measured by the Oswestry Disability Index (ODI). There were no significant differences in measures of depression and anxiety between the groups.

Significantly fewer participants in the group CBT group continued to meet the diagnostic criteria for PTSD post-treatment (11.7%) than in the control group (68.7%).

***Authors' conclusions***

These preliminary results suggest that group CBT can be effective in the treatment of PTSD in the aftermath of a serious motor vehicle accident.

***Reliability of conclusions/Strength of evidence***

The evidence in this summary is derived from only one small RCT, which has a number of methodological weaknesses. As noted by the study authors, their findings should be considered only as a preliminary indication of the potential effectiveness of group CBT, which requires confirmation by further research. In addition this study included only patients who had experienced trauma related to serious motor vehicle accidents and findings may, therefore, not be generalisable to other types of trauma.

**What do guidelines say?**

National guidelines do not comment on effective group therapies for adults who have suffered an injury/accident.

**Date question received:** 25/07/2016

**Date searches conducted:** 04/11/2016

**Date answer completed:** 14/11/2016

## **References**

### ***Randomised controlled trials***

Beck, JG., Coffey, SF., Foy, DW., Keane, TM., Blanchard, EB. (2009). "Group cognitive behavior therapy for chronic posttraumatic stress disorder: An initial randomized pilot study." Behavior Therapy **40**(1): 82.

## Results

### *Randomised controlled trials*

Author (year)	Inclusion criteria	Number of participants	Summary of results	Risk of bias
Beck et al (2009)	<p><b>Participants:</b> Individuals with post-traumatic stress disorder (PTSD). Participants were recruited from pain clinics, physical therapists, chiropractors, and specialists in rehabilitation and internal medicine, as well as public service announcements. Individuals qualified for assessment if they had experienced a motor vehicle accident (MVA) involving actual or threatened death or serious injury at least 6 months prior to assessment, and whose emotional response included intense fear, helplessness, horror or the perception that they would die (PTSD).</p> <p><b>Intervention:</b> Group Cognitive Behavioural Therapy, comprising 14 weekly sessions of two hours, guided by two therapists.</p> <p><b>Comparator:</b> Minimum Contact, comprising telephone contact by the project co-ordinator every four weeks. A</p>	N = 44 (I=26 C=18)	<p>This study aimed to assess the effectiveness of a group CBT intervention, compared to a minimal contact control condition, for alleviating the symptoms of PTSD.</p> <p>The mean age of study participants was 43.3±12.8 years and 36 were female. Most (89%) self-identified as Caucasian, 75% had at least some college level education, and 54% were either un-employed or on disability. Most (80%) participants reported ongoing pain as a result of injuries sustained during the MVA. Forty-five percent of the sample reported having experienced additional traumas, which included natural disasters, non-MVA accidents, sexual assault, and witnessing a violent death. The treatment and control groups appeared broadly similar at baseline, with respect to outcome measures, but it was not clear whether there were any other significant, between-group differences in participant characteristics.</p> <p>The group CBT intervention included psychoeducation (session 1), exposure, both in-vivo and imaginal (sessions 2 to 14), mindfulness meditation training and practice to ensure that anxiety generated by driving to the treatment session was manageable (sessions 2 to 14), progressive muscle</p>	<p>Groups of 4 to 7 individuals were formed as participants became eligible and groups were then randomly assigned to the treatment or control conditions.</p> <p>The nature of the intervention precluded blinding of participants</p>

	<p>structured script was used to assess symptom severity and suicidality.</p> <p><b>Outcome:</b> PTSD symptoms (clinician-administered PTSD scale [CAPS], self-reported Impact of Event Scale-Revised [IES-R]), anxiety and depression (Anxiety Disorders Interview schedule for DSM-IV [ADIS-IV], Beck Anxiety Inventory [BAI], Beck Depression Inventory [BDI]), physical functioning and pain severity (Oswestry Disability Index [ODI], the pain severity subscale of the Multidimensional Pain Inventory [PS-MPI]). Outcomes were assessed at baseline, four weeks post-intervention and at three months follow-up.</p>		<p>relaxation for stress management (sessions 4 to 7), cognitive therapy interventions (sessions 6 to 8), application of cognitive interventions and assertion training to address anger (Sessions 9 and 10), behavioural activation to address depression and social isolation (Sessions 11 and 12), and relapse prevention training (Sessions 13 and 14).</p> <p><i>PTSD:</i> Both the treatment and control groups showed a significant pre- to post-intervention reduction in the total CAPS score, but the mean post-treatment score was significantly lower in the group CBT group (Hedge's g effect size 0.84); the effect size was smaller (0.35) at three months follow-up. Results were similar using the self-reported measure IES-R; the post-treatment effect size was 0.96 and the three month follow-up effect size was 0.12. Sub-scale results were reported for both measures and followed a similar pattern. Significantly fewer participants in the group CBT group continued to meet the diagnostic criteria for PTSD post-treatment (11.7%) than in the control group (68.7%).</p> <p><i>Anxiety and depression:</i> There were no significant post-treatment differences in the number of diagnosed depression and anxiety disorders, or in BDI or BAI scores, between the groups.</p> <p><i>Physical functioning and pain severity:</i> Both the treatment and control groups showed a significant reduction in pain intensity over time, but there was no</p>	<p>and study personnel.</p> <p>Outcomes which were not self-reported measures were rated by an independent interviewer.</p> <p>Analyses included completers only. Eleven (25%) of participants did not complete the intervention period and a further 2 participants from the GCBT group did not complete</p>
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			significant group effect. Participants in the group CBT group had significantly lower post-treatment ODI scores than those in the control group (effect size 0.66).	follow-up. Results were reported for all specified outcomes.
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**Risk of bias*****Randomised controlled trials***

Study	RISK OF BIAS					
	Random allocation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective Reporting
Beck et al (2009)						

 Low risk High risk Unclear risk

## Search details

Source	Search Strategy	Number of hits	Relevant evidence identified
NICE	Group Injury Accident	3	0
MEDLINE	<p>23. Medline; exp INJURIES/ OR exp ACCIDENTS/; 362615 results.</p> <p>24. Medline; injur*.ti,ab; 618938 results.</p> <p>25. Medline; accident.ti,ab; 40292 results.</p> <p>26. Medline; 23 OR 24 OR 25; 881103 results.</p> <p>28. Medline; "post-traumatic stress".ti,ab; 8374 results.</p> <p>29. Medline; ptsd.ti,ab; 16231 results.</p> <p>31. Medline; GROUP INTERVENTION/ OR PSYCHODRAMA/ OR SUPPORT GROUPS/ OR GROUP COUNSELING/ OR exp GROUP PSYCHOTHERAPY/; 1046 results.</p> <p>32. Medline; ((group ADJ3 therap*).ti,ab; 28177 results.</p> <p>33. Medline; ((group ADJ3 intervention*).ti,ab; 31034 results.</p> <p>34. Medline; ((group ADJ3 counsel*).ti,ab; 2136 results.</p> <p>35. Medline; ((group ADJ3 intervention*).ti,ab; 31034 results.</p> <p>36. Medline; ((support group*).ti,ab; 144776 results.</p> <p>37. Medline; ((psychodynamic ADJ3 group*).ti,ab; 209 results.</p> <p>38. Medline; ((cognitive ADJ3 group*).ti,ab; 6105 results.</p> <p>39. Medline; ((debriefing ADJ3 group*).ti,ab; 136 results.</p> <p>40. Medline; 31 OR 32 OR 33 OR 34 OR 35 OR 36 OR 37 OR 38 OR 39; 203649 results.</p> <p>41. Medline; ((wound* or trauma OR damag* ADJ2 physical*).ti,ab; 325477 results.</p> <p>42. Medline; 26 OR 41; 1094096 results.</p> <p>44. Medline; 28 AND 29; 4583 results.</p> <p>45. Medline; STRESS DISORDERS, POST-TRAUMATIC/ OR STRESS DISORDERS, TRAUMATIC/ OR PSYCHOLOGICAL TRAUMA/ OR WAR-RELATED INJURIES/; 24636 results.</p> <p>46. Medline; 44 OR 45; 26063 results.</p>	62	

	<p>47. Medline; 40 AND 42 AND 46; 587 results.  48. Medline; "systematic review".ti,ab; 77822 results.  49. Medline; "meta analysis".ti,ab; 82539 results.  50. Medline; 48 OR 49; 133878 results.  51. Medline; 47 AND 50; 22 results  52. Medline; 47 [Limit to: (Document type Randomized Controlled Trial) and (Age group Young Adult or Adult or Middle aged or Aged or Aged, 80 and over)]; 62 results</p>		
EMBASE	<p>23. EMBASE; exp INJURIES/ OR exp ACCIDENTS/; 2049739 results.  24. EMBASE; injur*.ti,ab; 791286 results.  25. EMBASE; accident.ti,ab; 51762 results.  26. EMBASE; 23 OR 24 OR 25; 2241360 results.  27. EMBASE; ACUTE STRESS DISORDER/ OR EMOTIONAL TRAUMA/ OR POST-TRAUMATIC STRESS/ OR STRESS REACTIONS/ OR TRAUMATIC NEUROSIS/ OR exp POSTTRAUMATIC STRESS DISORDER/; 50751 results.  28. EMBASE; "post-traumatic stress".ti,ab; 11387 results.  29. EMBASE; ptsd.ti,ab; 21510 results.  30. EMBASE; 27 OR 28 OR 29; 52344 results.  31. EMBASE; GROUP INTERVENTION/ OR PSYCHODRAMA/ OR SUPPORT GROUPS/ OR GROUP COUNSELING/ OR exp GROUP PSYCHOTHERAPY/; 20286 results.  32. EMBASE; ((group ADJ3 therap*).ti,ab; 33606 results.  33. EMBASE; ((group ADJ3 intervention*).ti,ab; 40116 results.  34. EMBASE; ((group ADJ3 counsel*).ti,ab; 2339 results.  35. EMBASE; ((group ADJ3 intervention*).ti,ab; 40116 results.  36. EMBASE; ((support group*).ti,ab; 206931 results.  37. EMBASE; ((psychodynamic ADJ3 group*).ti,ab; 274 results.  38. EMBASE; ((cognitive ADJ3 group*).ti,ab; 6213 results.  39. EMBASE; ((debriefing ADJ3 group*).ti,ab; 174 results.  40. EMBASE; 31 OR 32 OR 33 OR 34 OR 35 OR 36 OR 37 OR 38 OR 39; 289892 results.  41. EMBASE; ((wound* oR trauma OR damag* ADJ2 physical*).ti,ab; 2801 results.  42. EMBASE; 26 OR 41; 2242537 results.  43. EMBASE; 30 AND 40 AND 42; 1182 results.  44. EMBASE; 43 [Limit to: (EBM-Evidence Based Medicine Meta Analysis or Systematic Review) and (Human Age Groups</p>	72	

	Adult 18 to 64 years or Aged 65+ years)]; 5 results 45. EMBASE; 43 [Limit to: (Clinical Trials Randomized Controlled Trial) and (Human Age Groups Adult 18 to 64 years or Aged 65+ years)]; 72 results		
PsycINFO/CINAHL	<ol style="list-style-type: none"> <li>1. PsycInfo; exp INJURIES/ OR exp ACCIDENTS/; 32514 results.</li> <li>2. PsycInfo; injur*.ti,ab; 73068 results.</li> <li>3. PsycInfo; accident.ti,ab; 9704 results.</li> <li>4. PsycInfo; 1 OR 2 OR 3; 89432 results.</li> <li>5. PsycInfo; ACUTE STRESS DISORDER/ OR EMOTIONAL TRAUMA/ OR POST-TRAUMATIC STRESS/ OR STRESS REACTIONS/ OR TRAUMATIC NEUROSIS/ OR exp POSTTRAUMATIC STRESS DISORDER/; 46294 results.</li> <li>6. PsycInfo; "post-traumatic stress".ti,ab; 8393 results.</li> <li>7. PsycInfo; ptsd.ti,ab; 23808 results.</li> <li>8. PsycInfo; 5 OR 6 OR 7; 51948 results.</li> <li>9. PsycInfo; GROUP INTERVENTION/ OR PSYCHODRAMA/ OR SUPPORT GROUPS/ OR GROUP COUNSELING/ OR exp GROUP PSYCHOTHERAPY/; 32014 results.</li> <li>10. PsycInfo; ((group ADJ3 therap*).ti,ab; 18764 results.</li> <li>11. PsycInfo; ((group ADJ3 intervention*).ti,ab; 15821 results.</li> <li>12. PsycInfo; ((group ADJ3 counsel*).ti,ab; 5161 results.</li> <li>13. PsycInfo; ((group ADJ3 intervention*).ti,ab; 15821 results.</li> <li>14. PsycInfo; ((support group*).ti,ab; 86315 results.</li> <li>16. PsycInfo; ((psychodynamic ADJ3 group*).ti,ab; 675 results.</li> <li>17. PsycInfo; ((cognitive ADJ3 group*).ti,ab; 7211 results.</li> <li>18. PsycInfo; ((debriefing ADJ3 group*).ti,ab; 148 results.</li> <li>19. PsycInfo; 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 16 OR 17 OR 18; 137270 results.</li> <li>20. PsycInfo; ((wound* oR trauma OR damag* ADJ2 physical*).ti,ab; 50971 results.</li> <li>21. PsycInfo; 4 OR 20; 132384 results.</li> <li>22. PsycInfo; 8 AND 19 AND 21; 1405 results.</li> <li>23. PsycInfo; 22 [Limit to: (Methodology Meta Analysis or Systematic Review) and (Age group Adulthood 18 Yrs &amp; Older)]; 5 results</li> <li>23. PsycInfo; random*.ti,ab; 154810 results.</li> <li>24. PsycInfo; (doubl* ADJ blind*).ti,ab; 20223 results.</li> <li>25. PsycInfo; (singl* ADJ blind*).ti,ab; 1891 results.</li> </ol>	437	

	<p>26. PsycInfo; groups.ti,ab; 417022 results.  27. PsycInfo; exp EXPERIMENTAL DESIGN/; 52136 results.  28. PsycInfo; controlled.ti,ab; 96476 results.  29. PsycInfo; (clinical adj3 study).ti,ab; 12917 results.  30. PsycInfo; trial.ti,ab; 82651 results.  31. PsycInfo; "randomized controlled trial".ti,ab; 11612 results.  32. PsycInfo; 23 OR 24 OR 25 OR 26 OR 27 OR 28 OR 29 OR 30 OR 31; 674396 results.  33. PsycInfo; 22 AND 32; 713 results.  34. PsycInfo; 33 [Limit to: (Age group Adulthood 18 Yrs &amp; Older)]; 437 results</p>		
CENTRAL	<p>#1 MeSH descriptor: [Wounds and Injuries] explode all trees 18227  #2 MeSH descriptor: [Accidents] this term only 56  #3 "injur*" 35427  #4 "accident*" 10930  #5 (wound* or trauma* or damag* ADJ2 physical*) 39407  #6 #1 or #2 or #3 or #4 or #5 77004  #7 MeSH descriptor: [Trauma and Stressor Related Disorders] explode all trees 1510  #8 "post-traumatic stress" 896  #9 ptsd 1853  #10 #7 or #8 or #9 2804  #11 MeSH descriptor: [Psychotherapy, Group] this term only 1796  #12 "group counselling" 183  #13 "group therap*" 2219  #14 "group psychotherap*" 530  #15 #11 or #12 or #13 or #14 3883  #16 #6 and #10 and #15 198</p>	198	

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