

# Best Evidence Summaries of Topics in Mental Healthcare

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

### **Question**

In older adults in mental health services, how effective is acupuncture compared to any other treatment in achieving improved participant outcomes?

### **Clarification of question using PICO structure**

*Patients:* Older adults in mental health services

*Intervention:* Acupuncture

*Comparator:* Any comparison

*Outcome:* Improved participant outcomes

### **Clinical and research implications**

One high quality Cochrane systematic review provided evidence to inform this summary. It should be noted, however, that all of the information included in this summary was derived from trials which did not meet the inclusion criteria of the review. Fifteen of the 35 studies identified and excluded from the Cochrane review reported comparative data for acupuncture alone versus control or another intervention; these studies were deemed to have potential applicability to this evidence summary. Data from these studies indicated that acupuncture had no significant beneficial effects when compared to a control condition not intended to treat dementia (calcium channel blocker or low molecular weight dextran). Other included studies compared acupuncture to huperzine, piracetam or aniracetam, duxil, or hydergine. All comparisons (active and control) indicated that acupuncture may be associated with increased depressive symptoms (Hamilton Depression Scale). Comparisons with huperzine and hydergine indicated that acupuncture may be associated with increased cognition (Mini Mental State examination) or decrease in dementia symptoms (Blessed Dementia Scale). Overall, review authors' conclusion, that the evidence is currently inadequate to support the effectiveness of acupuncture for the treatment of vascular dementia, is likely to be reliable.

No studies were identified which assessed the effectiveness of acupuncture for the treatment of any condition other than vascular dementia in older adults in mental health services.

A significant number of non-English studies (11 Chinese studies) were excluded from this evidence summary, due to limited resources. The included systematic review (1), does consider non-English studies. There are published Cochrane Systematic Reviews that consider the evidence for use of

acupuncture with depression and schizophrenia. These reviews also included non-English language studies, however, none reported evidence on the use of the intervention in older adults.

As noted by the authors of the Cochrane review, high quality, randomised, double-blind, placebo-controlled trials are needed to properly assess the efficacy of acupuncture for the treatment of vascular dementia. Trials are also needed to assess the efficacy of acupuncture in other populations of older adults in mental health services.

### **What does the evidence say?**

#### *Number of included studies/reviews (number of participants)*

We identified one Cochrane systematic review, which was potentially relevant to this evidence summary.<sup>1</sup> Eleven Chinese language studies (not listed) were excluded due to resource limitations. The Cochrane review aimed to assess the efficacy and possible adverse effects of acupuncture, compared to placebo or no treatment, for treating vascular dementia and had no restrictions on language or publication status. The review identified 35 studies, however, none of these met the inclusion criteria for the review. Fifteen of the excluded studies reported comparative data for acupuncture alone versus control or another intervention; these studies were deemed to have potential applicability to this evidence summary. Because all studies were classified as “excluded”, only limited details were reported.

#### *Main Findings*

Of the 15 potentially relevant studies, two compared acupuncture to a control condition not intended to treat dementia (calcium channel blocker or low molecular weight dextran). These two studies found, respectively, no difference between the treatment groups on Mini Mental State Examination (MMSE), Blessed Dementia Scale (BDS), Hamilton Depression scale (HDS), or Activities of Daily Living (ADL) score, and an increase in depressive symptoms (HDS) and decrease in functional activity associated with acupuncture. Three studies compared acupuncture with duxil and found no significant differences between the treatment groups on any outcome measure assessed. Two studies compared acupuncture with piracetam or aniracetam; both studies found an increase in depressive symptoms (HDS) and no positive treatment effects associated with acupuncture. Two studies compared acupuncture with compared acupuncture with the alkaloid huperzine. Both studies found improvements in MMSE associated with acupuncture (treatment effects 3.90 (95% CI 2.25 to 5.55) and 5.31 (95% CI 2.33 to 8.29)), however, evidence on ADL was contradictory and one study found an increase in depressive symptoms (HDS) associated with acupuncture. Finally, six studies compared acupuncture with the ergoloid hydergine. Where measured, these studies showed an increase in depressive symptoms (HDS) associated with acupuncture (2 studies), no significant difference between the groups in functional activity or ADL (5 studies) and improvements in MMSE (treatment effects ranged from 2.2 to 5.0) or BDS (treatment effect -3.08 (95%CI -5.96 to -0.20) associated with acupuncture (4 studies).

#### *Authors Conclusions*

The authors of the systematic review concluded that the effectiveness of acupuncture for vascular dementia is uncertain and high quality, randomised, double-blind, placebo-controlled trials are urgently needed.

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

One high quality Cochrane systematic review provided evidence to inform this summary. It should be noted, however, that all of the information included in this summary was derived from trials which did not meet the inclusion criteria of the review. The review authors' conclusion, that evidence is currently inadequate to support the effectiveness of acupuncture for the treatment of vascular dementia, is likely to be reliable.

### **What do guidelines say?**

There are no UK clinical guidelines that discuss the use acupuncture in relation to older adults with mental health / neurodegenerative related diseases.

**Date question received: 30/05/2013**

**Date searches conducted: 04/06/2013**

**Date answer completed:**

### **References**

#### *Systematic Reviews*

1. Peng W, Wang Y, Zhang Y, Liang CM. Acupuncture for vascular dementia. Cochrane Database of Systematic Reviews 2007, Issue 2. Art. No.: CD004987. DOI: 10.1002/14651858.CD004987.pub2. <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD004987.pub2/pdf>

## Results

### Systematic Reviews

Author (year)	Search Date	Inclusion criteria	Number of included studies	Summary of results	Risk of bias
Peng 2007	27/04/2011	<p><i>Participants</i> – Studies which included only participants with a diagnosis of vascular dementia according to recognised criteria (e.g. Alzheimer’s Disease Diagnostic and Treatment Centers (ADDTc); National Institute of Neurological Disorders and Stroke-Association Internationale pour la Recherche et l’Enseignement en Neurosciences (NINDS-AIREN); Statistical Classification of Diseases, 10th Revision (ICD-10); and Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)), or studies with mixed populations where separate data were available for participants with vascular dementia.</p> <p><i>Intervention</i> – Studies that examined any type of acupuncture were considered. This could include body acupuncture, scalp acupuncture or electro acupuncture.</p> <p><i>Comparison</i> – Placebo or no intervention.</p> <p><i>Outcomes</i> – Studies that reported measures of cognitive function, activities of daily living,</p>	None of the 35 identified trials met the inclusion criteria of the review.	<p>This review aimed to assess the efficacy and possible adverse effects of acupuncture therapy for treating vascular dementia.</p> <p>None of the 35 identified trials met the inclusion criteria of the review. However, 15 of the excluded studies reported comparative data for acupuncture alone versus control or another intervention; these studies may have some applicability to this evidence summary. Because all studies were classified as “excluded”, only limited details were reported. The results of the 15 potentially relevant studies are summarised below.</p> <p>Two studies (n= 120 and n=60) compared acupuncture with the alkaloid huperzine. Both studies found significant improvements in Mini Mental State examination (MMSE) scores associated with acupuncture (treatment effects 3.90 (95% CI 2.25 to 5.55) and 5.31 (95% CI 2.33 to 8.29), respectively).</p>	<p>The research objective was clearly reported and appropriate inclusion criteria were defined.</p> <p>Seven bibliographic databases were searched for relevant studies. Grey literature sources and trials registries were also searched. Chinese language journals and conference abstracts were hand searched. The bibliographies of retrieved articles were screened for relevant studies.</p>

		<p>behaviour, quality of life (QoL), mood, or safety (incidence of adverse events) were eligible for inclusion.</p> <p><i>Study design</i> – Published or un-published randomised controlled trials (RCTs) in any language. Studies with inadequate randomisation were excluded.</p>		<p>The first study found a decline in activities of daily living (ADL) score associated with acupuncture (treatment effect -4.40 (95% CI -6.99 to -1.81)) and the second found an improvement (treatment effect 10.58 (95% CI 7.97 to 13.19)). The second study also found an increase in depressive symptoms on the Hamilton Depression Scale (HDS) associated with acupuncture (treatment effect 3.84 (95% CI 1.94 to 5.74)).</p> <p>Two studies (n=63 and n=60) compared acupuncture with piracetam or aniracetam. Both studies found an increase in depressive symptoms (HDS) associated with acupuncture (treatment effect 3.22 (95% CI 0.17 to 6.27) and 2.10 (95%CI -0.15 to 4.35), respectively). The second study found no significant difference between the treatments in functional activity (FAQ) or ADL.</p> <p>Six studies (total n=389) compared acupuncture to the ergoloid hydergine. Two studies found an increase in depressive symptoms (HDS) associated with acupuncture (treatment effect 5.10 (95% CI 1.47 to 8.73) and 6.73 (95% CI 3.74 to 9.72), respectively. Two studies and three studies, respectively, found no differences between</p>	<p>Inclusion screening and data extraction (planned, but no studies were eligible for inclusion) were undertaken by two reviewers and any disagreements were resolved by discussion or consultation with a third reviewer; this approach is designed to minimise the potential for error and/or bias in the review process.</p> <p>The methodological quality of included studies was to be assessed based on three criteria: randomisation; blinding; loss to follow-up. However, no</p>
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			<p>treatments in FAQ and ADL scores. Three studies found improvements in MMSE associated with acupuncture (treatment effects ranged from 2.2 to 5.0). One study found an improvement in dementia symptoms measured on the Blessed Dementia Scale (BDS) associated with acupuncture (treatment effect -3.08 (95%CI - 5.96 to -0.20).</p> <p>Three studies (total n=240) compared acupuncture to duxil. All three studies found no difference in depressive symptoms (HDS) between the two treatment groups. Two studies also found no differences in MMSE or FAQ scores.</p> <p>One study (n=108) compared acupuncture with the calcium channel blocker nimodipine (control). This study found no significant differences between the two groups on MMSE, BDS, HDS, or ADL scores.</p> <p>The final study (n=78) compared acupuncture with low molecular weight heparin (control). This study found an increase in depressive symptoms (HDS) and a decrease in functional activities (FAQ) associated with acupuncture (treatment effects 5.26 (95% CI 3.43 to 7.09) and -7.05 (95% CI -10.55 to -3.55), respectively).</p>	<p>studies were identified which met the inclusion criteria of the review.</p> <p>The review did not include any synthesis, as all identified studies were classified as “excluded”.</p>
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**Risk of Bias: SRs**

Author (year)	Risk of Bias				
	Inclusion criteria	Searches	Review Process	Quality assessment	Synthesis
Peng 2007					

 Low Risk

 High Risk

 Unclear Risk

## Search Details

Source	Search Strategy	Number of hits	Relevant evidence identified
<b><i>SRs and Guidelines</i></b>			
NICE	Acupuncture AND old	9	1
DARE	1 (acupuncture):TI IN DARE 281 Delete 2 MeSH DESCRIPTOR Acupuncture EXPLODE ALL TREES 22 Delete 3 MeSH DESCRIPTOR Acupuncture Therapy EXPLODE ALL TREES 332 Delete 4 #1 OR #2 OR #3 423 Delete 5 (dementia):TI IN DARE 263 Delete 6 (older) IN DARE 1638 Delete 7 (old) IN DARE 635 Delete 8 (geriatric) IN DARE 310 Delete 9 (senior) IN DARE 97 Delete 10 #5 OR #6 OR #7 OR #8 OR #9 2579 Delete 11 #4 AND #10 9 Delete		
<b><i>Primary studies</i></b>			
CENTRAL	#1 "acupuncture":ti,ab,kw (Word variations have been searched) 5969  #2 MeSH descriptor: [Acupuncture] explode all trees  133  #3Enter terms for searc#1 or #25969  #4Enter terms for searc"mental illness" or " mental disorder"1485  #5Enter terms for searcpsychosis2445	183	

	<p>#6Enter terms for searcpsychotic disorder2544</p> <p>#7Enter terms for searcdepression29424</p> <p>#8Enter terms for searcanxiety or "anxiety disorder"19155</p> <p>#9Enterschizophrenia8721</p> <p>#10Enter terms for searcbipolar3828</p> <p>#11Enter terms for searc dementia8973</p> <p>#12Enter terms for searc"eating disorders"1014</p> <p>#13Enter terms for searc"personality disorder"957</p> <p>#14Enter terms for searc#5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #1360350</p> <p>#15Enter terms for searc#3 and #14506</p> <p>#16Enter terms for searcaged or elderly or "older adult" or geriatric324282</p> <p>#17Enter terms for searc#15 and #16 257</p> <p>Central only 183</p>		
PsycINFO	<p>25. PsycINFO; ACUPUNCTURE/; 1049 results.</p> <p>26. PsycINFO; acupuncture.ti,ab; 1384 results.</p> <p>27. PsycINFO; 25 OR 26; 1509 results.</p> <p>28. PsycINFO; MENTAL HEALTH/ OR PSYCHOTIC DISORDERS/; 35513 results.</p>	25	

<p>29. PsycINFO; 27 AND 28; 15 results.</p> <p>30. PsycINFO; ("mental illness" OR "mental disorder").ti,ab; 29491 results.</p> <p>31. PsycINFO; psychosis.ti,ab; 25651 results.</p> <p>32. PsycINFO; depression.ti,ab; 157539 results.</p> <p>33. PsycINFO; bipolar.ti,ab; 25139 results.</p> <p>34. PsycINFO; dementia.ti,ab; 39466 results.</p> <p>35. PsycINFO; schizophrenia.ti,ab; 72737 results.</p> <p>36. PsycINFO; anxiety.ti,ab; 124431 results.</p> <p>37. PsycINFO; "eating disorders".ti,ab; 11900 results.</p> <p>38. PsycINFO; "personality disorder*".ti,ab; 22751 results.</p> <p>39. PsycINFO; 30 OR 31 OR 32 OR 33 OR 34 OR 35 OR 36 OR 37 OR 38; 407330 results.</p> <p>40. PsycINFO; 28 OR 39; 433454 results.</p> <p>41. PsycINFO; 27 AND 40; 236 results.</p> <p>42. PsycINFO; "older adult*".ti,ab; 24611 results.</p> <p>43. PsycINFO; aged.ti,ab; 200295 results.</p> <p>44. PsycINFO; elder*.ti,ab; 48785 results.</p> <p>45. PsycINFO; GERIATRICS/; 6456 results.</p>		
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	<p>46. PsycINFO; exp AGED/; 1936 results.</p> <p>47. PsycINFO; 42 OR 43 OR 44 OR 45 OR 46; 255195 results.</p> <p>48. PsycINFO; 41 AND 47; 25 results.</p>		
Medline	<p>25. MEDLINE; ACUPUNCTURE/; 1135 results.</p> <p>26. MEDLINE; acupuncture.ti,ab; 13575 results.</p> <p>27. MEDLINE; 25 OR 26; 13787 results.</p> <p>28. MEDLINE; MENTAL HEALTH/ OR PSYCHOTIC DISORDERS/; 50499 results.</p> <p>29. MEDLINE; 27 AND 28; 20 results.</p> <p>30. MEDLINE; ("mental illness" OR "mental disorder").ti,ab; 19134 results.</p> <p>31. MEDLINE; psychosis.ti,ab; 22221 results.</p> <p>32. MEDLINE; depression.ti,ab; 202252 results.</p> <p>33. MEDLINE; bipolar.ti,ab; 40030 results.</p> <p>34. MEDLINE; dementia.ti,ab; 61241 results.</p> <p>35. MEDLINE; schizophrenia.ti,ab; 71374 results.</p> <p>36. MEDLINE; anxiety.ti,ab; 101775 results.</p> <p>37. MEDLINE; "eating disorders".ti,ab; 8294 results.</p> <p>38. MEDLINE; "personality disorder*".ti,ab; 13228 results.</p>	96	

<p>39. MEDLINE; 30 OR 31 OR 32 OR 33 OR 34 OR 35 OR 36 OR 37 OR 38; 450367 results.</p> <p>40. MEDLINE; 28 OR 39; 482392 results.</p> <p>41. MEDLINE; 27 AND 40; 633 results.</p> <p>42. MEDLINE; "older adult*".ti,ab; 31689 results.</p> <p>43. MEDLINE; aged.ti,ab; 337634 results.</p> <p>44. MEDLINE; elder*.ti,ab; 169643 results.</p> <p>45. MEDLINE; GERIATRICS/; 26153 results.</p> <p>46. MEDLINE; exp AGED/; 2217448 results.</p> <p>47. MEDLINE; 42 OR 43 OR 44 OR 45 OR 46; 2486227 results.</p> <p>48. MEDLINE; 41 AND 47; 137 results.</p> <p>49. MEDLINE; "randomized controlled trial".pt; 352898 results.</p> <p>50. MEDLINE; "controlled clinical trial".pt; 86354 results.</p> <p>51. MEDLINE; randomized.ab; 270329 results.</p> <p>52. MEDLINE; placebo.ab; 145466 results.</p> <p>53. MEDLINE; "drug therapy".fs; 1622270 results.</p> <p>54. MEDLINE; randomly.ab; 196629 results.</p> <p>55. MEDLINE; trial.ab; 279640 results.</p>		
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	<p>56. MEDLINE; groups.ab; 1265511 results.</p> <p>57. MEDLINE; 49 OR 50 OR 51 OR 52 OR 53 OR 54 OR 55 OR 56; 3149501 results.</p> <p>58. MEDLINE; 48 AND 57; 96 results.</p>		
CINAHL	<p>25. CINAHL; ACUPUNCTURE/; 6405 results.</p> <p>26. CINAHL; acupuncture.ti,ab; 5104 results.</p> <p>27. CINAHL; 25 OR 26; 7623 results.</p> <p>28. CINAHL; MENTAL HEALTH/ OR PSYCHOTIC DISORDERS/; 13914 results.</p> <p>29. CINAHL; 27 AND 28; 15 results.</p> <p>30. CINAHL; ("mental illness" OR "mental disorder").ti,ab; 8009 results.</p> <p>31. CINAHL; psychosis.ti,ab; 2713 results.</p> <p>32. CINAHL; depression.ti,ab; 37464 results.</p> <p>33. CINAHL; bipolar.ti,ab; 3940 results.</p> <p>34. CINAHL; dementia.ti,ab; 18173 results.</p> <p>35. CINAHL; schizophrenia.ti,ab; 6885 results.</p> <p>36. CINAHL; anxiety.ti,ab; 21974 results.</p> <p>37. CINAHL; "eating disorders".ti,ab; 3068 results.</p>	52	

	<p>38. CINAHL; "personality disorder*".ti,ab; 2481 results.</p> <p>39. CINAHL; 30 OR 31 OR 32 OR 33 OR 34 OR 35 OR 36 OR 37 OR 38; 88094 results.</p> <p>40. CINAHL; 28 OR 39; 98466 results.</p> <p>41. CINAHL; 27 AND 40; 273 results.</p> <p>42. CINAHL; "older adult*".ti,ab; 17883 results.</p> <p>43. CINAHL; aged.ti,ab; 51040 results.</p> <p>44. CINAHL; elder*.ti,ab; 44002 results.</p> <p>45. CINAHL; GERIATRICS/; 2241 results.</p> <p>46. CINAHL; exp AGED/; 308548 results.</p> <p>47. CINAHL; 42 OR 43 OR 44 OR 45 OR 46; 349779 results.</p> <p>48. CINAHL; 41 AND 47; 52 results.</p>		
AMED	<p>1. AMED; ACUPUNCTURE/; 3194 results.</p> <p>2. AMED; acupuncture.ti,ab; 6196 results.</p> <p>3. AMED; 1 OR 2; 7206 results.</p> <p>4. AMED; MENTAL HEALTH/ OR PSYCHOTIC DISORDERS/; 1387 results.</p> <p>5. AMED; 3 AND 4; 6 results.</p> <p>6. AMED; ("mental illness" OR "mental disorder").ti,ab; 1141</p>	12	

results.		
7. AMED; psychosis.ti,ab; 206 results.		
8. AMED; depression.ti,ab; 4705 results.		
9. AMED; bipolar.ti,ab; 245 results.		
10. AMED; dementia.ti,ab; 1723 results.		
11. AMED; schizophrenia.ti,ab; 782 results.		
12. AMED; anxiety.ti,ab; 3109 results.		
13. AMED; "eating disorders".ti,ab; 129 results.		
14. AMED; "personality disorder*".ti,ab; 199 results.		
15. AMED; 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14; 10197 results.		
16. AMED; 4 OR 15; 11154 results.		
17. AMED; 3 AND 16; 201 results.		
18. AMED; "older adult*".ti,ab; 2409 results.		
19. AMED; aged.ti,ab; 5007 results.		
20. AMED; elder*.ti,ab; 5005 results.		
21. AMED; GERIATRICS/; 324 results.		
22. AMED; exp AGED/; 10648 results.		
23. AMED; 18 OR 19 OR 20 OR 21 OR 22; 16389 results.		

	24. AMED; 17 AND 23; 12 results.		
<b>Summary</b>	<b>NA</b>	<b>NA</b>	

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