

Evidence Based Medicine

針灸與慢性疲勞

主治醫師:鄭為仁

住院醫師:畢宇蕎

Intern:俞學彪、蕭家任、何其鋁、張旨余、閻暉勳

2017/11/29

Scenerio

- 黃醫師於門診時，遇到一位64 y/o female，有Chronic fatigue syndrome。病人多年來感覺異常疲累但在西醫各科看診卻檢查不出原因，家屬提問能不能藉由針刺及艾灸來改善慢性疲勞的問題？
- 他主要想探討的是
針刺及艾灸真的能改善慢性疲勞嗎

執行 EBM 五大步驟 (5A)

Asking an answerable question

問可以回答的問題

Acquire the best available evidence

搜尋最佳文獻證據

Appraise their validity & usefulness

嚴格評讀文獻效度

Apply to your unique patients

用於你的病人之上

Assess performance of above procedures

稽核上述四個步驟

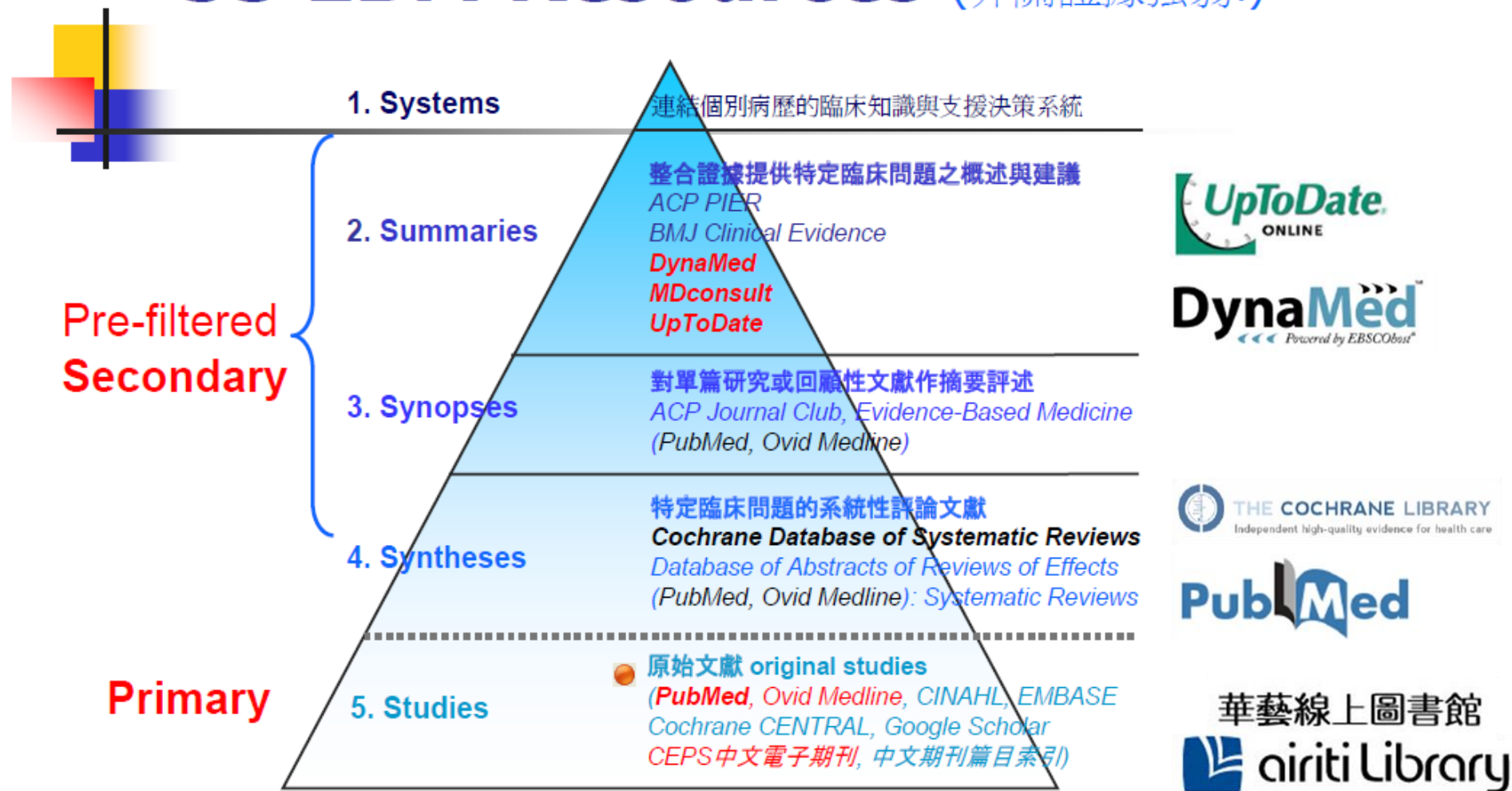
Step 1: Asking

- 由臨床資料問可以回答的問題
- PICO

Patient/Problem	Chronic fatigue syndrome 患者
Intervention	Acupuncture and moxibustion
Comparison	Chinese herbal medicine 、 Western medicine 、 Sham-acupuncture (Placebo)
Outcome	Relieve symptoms

Step 2: Acquire • 搜尋最佳文獻證據

5S EBM Resources (非關證據強弱!)



Step 2: Acquire

- 關鍵字設定
- Acupuncture, Moxibustion
- Chronic fatigue syndrome

Step 2: Acquire-UpToDate

UpToDate®

Acupuncture, moxibustion, Chronic fatigue syndrome



檢索結果："Acupuncture, moxibustion, Chronic fatigue syndrome"

所有主題

成人

兒童

病患

圖表

moxibustion = Ritual healing practices

chronic fatigue syndrome = Chronic fatigue syndrome / Systemic exertional intolerance disease

按一下 acupuncture 的相關詞彙 [complementary and alternative medicine](#), [traditional chinese medicine](#)

Complementary and alternative medicine in pediatrics

...style of **acupuncture**, which is gentler than the Chinese style. **Acupuncture** commonly is recommended by clinicians; over one-third of North American pediatric pain treatment programs provide **acupuncture** services... religious or **ritual healing practices** (eg, **coining** or sand painting),...

[Acupuncture](#)

[Summary](#)

Acupuncture

... specifically stated, "**acupuncture**" in this topic refers to these two most common procedures. A general discussion of **acupuncture** is presented here. Additional discussions of **acupuncture** for rheumatic conditions ...

[Acupuncture encounter](#)

[Summary and recommendations](#)

Differential diagnosis of suspected child physical abuse

... yarn on the skin. It is used in Southeast Asia, where it is considered a form of **acupuncture**. The lesions of **moxibustion** appear as a pattern of small discrete circular burns and may be confused with cigarette ...

[Cultural practices](#)

[Summary](#)

使用關鍵字

Acupuncture

Moxibustion

Chronic fatigue syndrome

符合條件結果:10

Step 2: Acquire-DynaMed



Acupuncture, Moxibustion, Chronic fatigue syndrome

Search



Browse: [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

[Browse Categories](#)

1-8 of 8 Page: 1

Acute low back pain

[Insomnia in adults](#)

[Dysmenorrhea](#)

[COPD](#)

[Ulcerative colitis](#)

[Diabetic peripheral neuropathy](#)

[Posttraumatic stress disorder \(PTSD\)](#)

[Stroke rehabilitation](#)

使用關鍵字

Acupuncture

Moxibustion

Chronic fatigue syndrome

符合條件結果:8

Acute low back pain

[+ Related Summaries](#)

[+ General Information](#)

[+ Epidemiology](#)

[+ Etiology and Pathogenesis](#)

[+ History and Physical](#)

[+ Diagnosis](#)

[+ Treatment](#)

[+ Complications and Prognosis](#)

[+ Prevention and Screening](#)

[+ Quality Improvement](#)

[+ Guidelines and Resources](#)

[+ Patient Information](#)

Step 2: Acquire-Cochrane Library



Search Search Manager Medical Terms (MeSH)

+ Title, Abstract, Keywords Acupuncture and moxibustion, Chronic fatigue syndrome

[Search Limits](#) [Search Help](#) (Word variations have been searched)

Clear

使用關鍵字
Acupuncture
Moxibustion
Chronic fatigue syndrome
符合條件結果:1

All Results (7)

Cochrane Reviews (0)

All

Review

Protocol

Other Reviews (1)

Trials (6)

Methods Studies (0)

Technology Assessments (0)

Economic Evaluations (0)

Cochrane Groups (0)

Database of Abstracts of Reviews of Effect : Issue 2 of 4, April 2015

There is **1** result from **36795** records for your search on '**Acupuncture and moxibustion, Chronic fatigue syndrome in Title, Abstract, Keywords in Other Reviews**'

Sort by Relevance: high to low

Select all | Fxport all | Fxport selected

- A meta analysis on randomized controlled trials of **acupuncture** treatment of **chronic fatigue syndrome** (Provisional abstract)
Centre for Reviews and Dissemination
Original Author(s): Wang JJ , Song YJ , Wu ZC , Chu XO , Wang XH , Wang XJ , Wei LN and Wang QM
Acupuncture Research, 2009, 34(6), 421-428

Fxport selected

Step 2: Acquire-PubMed

PubMed.gov
US National Library of Medicine
National Institutes of Health

PubMed [Create RSS](#) [Create alert](#) [Advanced](#)

Article types
Clinical Trial
Review
Customize ...

Text availability
Abstract
Free full text
Full text

PubMed Commons
Reader comments
Trending articles

Publication dates
5 years
10 years
Custom range...

Species
Humans
Other Animals

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Format: Summary Sort by: Most Recent Per page: 20 Send to

See 4 citations found by title matching your search:
[Acupuncture and moxibustion for chronic fatigue syndrome in traditional Chinese medicine: a systematic review and meta-analysis.](#) Wang T et al. BMC Complement Altern Med. (2017)
[\[Randomized controlled clinical trials of acupuncture and moxibustion treatment of chronic fatigue syndrome patients\].](#) Lu C et al. Zhen Ci Yan Jiu. (2014)
[A systematic review of acupuncture and moxibustion treatment for chronic fatigue syndrome in China.](#) Wang T et al. Am J Chin Med. (2008)

Search results
Items: 1 to 20 of 21

<< First < Prev Page 1 of 2 Next > Last >>

[Acupuncture and moxibustion for chronic fatigue syndrome in traditional Chinese medicine: a systematic review and meta-analysis.](#)
1. Wang T, Xu C, Pan K, Xiong H.
BMC Complement Altern Med. 2017 Mar 23;17(1):163. doi: 10.1186/s12906-017-1647-x. Review.
PMD: 28335756 **Free PMC Article**
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[Acupuncture and Moxibustion have Different Effects on Fatigue by Regulating the Autonomic Nervous System: A Pilot Controlled Clinical Trial.](#)
2. Shu Q, Wang H, Litscher D, Wu S, Chen L, Gaischek I, Wang L, He W, Zhou H, Litscher G, Liang F.
Sci Rep. 2016 Nov 25;6:37846. doi: 10.1038/srep37846.
PMD: 27886247 **Free PMC Article**
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使用關鍵字
Acupuncture
Moxibustion
Chronic fatigue syndrome
符合條件結果:21

("acupuncture"[MeSH Terms] OR
"acupuncture"[All Fields] OR
"acupuncture therapy"[MeSH
Terms] OR ("acupuncture"[All
Fields] AND "therapy"[All Fields])
OR "acupuncture therapv"[All

Search

[See more...](#)

Recent Activity

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Your browsing activity is empty.

Step 2: Acquire-華藝線上圖書館

The screenshot shows the Airiti Library website interface. At the top, there is a navigation bar with '瀏覽', '進階檢索', and '儲值&購物車'. Below this is a search bar with '文章' and '出版品' tabs, and a search button. The main content area displays search results for the query 'Acupuncture and moxibustion, Chronic fatigue syndrome'. The results list includes the title 'The Impact of Chronic Social Stress on Emotional Behavior in Mice and the Therapeutic Effect of Peripheral Mild-Heat Stimulation' by Hang Liu et al., published in Health 7卷10期 (2015/10), pages 1294-1305. The interface also shows filters for '來源資料庫', '學科分類', and '年代'.

使用關鍵字
Acupuncture
Moxibustion
Chronic fatigue syndrome
符合條件結果:1

Step 2: Acquire-結果

		搜尋結果	符合文章	符合預期
	→	10篇	0篇	X
	→	8篇	0篇	X
	→	1篇	0篇	X
	→	21篇	4篇	0
	→	1篇	0篇	X

Step 2: Acquire-結果


 PubMed
[Create RSS](#) [Create alert](#) [Advanced](#) [Help](#)

Article types
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[10 years](#)
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Species
[Humans](#)
[Other Animals](#)

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[Show additional filters](#)

Format: Summary ▾ **Sort by:** Most Recent ▾ **Per page:** 20 ▾ **Send to** ▾ **Filters:** [Manage Filters](#)

See 4 citations found by title matching your search:
[Acupuncture and moxibustion for chronic fatigue syndrome in traditional Chinese medicine: a systematic review and meta-analysis.](#) Wang T et al. BMC Complement Altern Med. (2017)
[\[Randomized controlled clinical trials of acupuncture and moxibustion treatment of chronic fatigue syndrome patients\].](#) Lu C et al. Zhen Ci Yan Jiu. (2014)
[A systematic review of acupuncture and moxibustion treatment for chronic fatigue syndrome in China.](#) Wang T et al. Am J Chin Med. (2008)

Search results
Items: 1 to 20 of 21

[<< First](#) [< Prev](#) Page of 2 [Next >](#) [Last >>](#)

- [Acupuncture and moxibustion for chronic fatigue syndrome in traditional Chinese medicine: a systematic review and meta-analysis.](#)
 Wang T, Xu C, Pan K, Xiong H.
 BMC Complement Altern Med. 2017 Mar 23;17(1):163. doi: 10.1186/s12906-017-1647-x. Review.
 PMID: 28335756 **Free PMC Article**
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- [Acupuncture and Moxibustion have Different Effects on Fatigue by Regulating the Autonomic Nervous System: A Pilot Controlled Clinical Trial.](#)
 Shu Q, Wang H, Litscher D, Wu S, Chen L, Gaischek I, Wang L, He W, Zhou H, Litscher G, Liang F.
 Sci Rep. 2016 Nov 25;6:37846. doi: 10.1038/srep37846.
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Find related data
 Database:

Search details
 ("acupuncture"[MeSH Terms] OR "acupuncture"[All Fields] OR "acupuncture therapy"[MeSH Terms] OR ("acupuncture"[All Fields] AND "therapy"[All Fields]) OR "acupuncture therapv"[All

[See more...](#)

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[Turn Off](#) [Clear](#)
 Your browsing activity is empty.

Step 3: Appraise

- 嚴格評讀文獻效度

Step 3: Appraise-嚴格評讀文獻效度

Critical Appraisal Skills Programme (CASP) Systematic Review Checklist

Are the results of the review valid? Q1~5

```
graph TD; A[Are the results of the review valid? Q1~5] --> B[What are the results? Q6~7]; B --> C[Will the results help locally? Q8~10];
```

What are the results? Q6~7

Will the results help locally? Q8~10

CASP

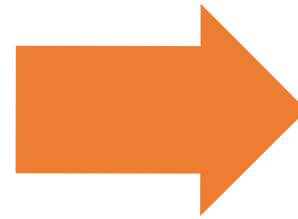
Systematic Review Checklist

- 1. Did the review address a clearly focused question?
- 2. Did the authors look for the right type of papers?
- 3. Do you think all the important, relevant studies were included?
- 4. Did the review's authors do enough to assess the quality of the included studies?
- 5. If the results of the review have been combined, was it reasonable to do so?
- 6. What are the overall results of the review?
- 7. How precise are the results?
- 8. Can the results be applied to the local population?
- 9. Were all important outcomes considered?
- 10. Are the benefits worth the harms and costs?

Are the results of the review valid?

Q1~Q2

- Screening Questions



Q3~Q5

- Detailed Questions

1. Did the review address a clearly focused question?

The intervention given

Acupuncture and moxibustion for chronic fatigue syndrome in traditional Chinese medicine: a systematic review and meta-analysis

The population studied

The outcomes considered ?

Yes

Can't tell

No

2. Did the authors look for the right type of papers?

Methods: We comprehensively reviewed literature including PubMed, EMBASE, Cochrane library, CBM (Chinese Biomedical Literature Database) and CNKI (China National Knowledge Infrastructure) up to May 2016, for RCT clinical research on CFS treated by acupuncture and moxibustion. Traditional direct meta-analysis was adopted to analyze the difference between AM and other treatments. Analysis was performed based on the treatment in experiment and control groups. Network meta-analysis was adopted to make comprehensive comparisons between any two kinds of treatments. The primary outcome was total effective rate, while relative risks (RR) and 95% confidence intervals (CI) were used as the final pooled statistics.

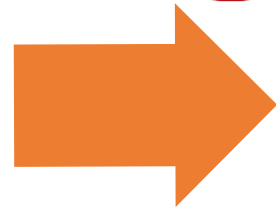


Is it worth continuing?

YES!

Q1~Q2

- Screening Questions



Q3~Q5

- Detailed Questions

3. Do you think all the important, relevant studies were included?

Search strategy and study selection

We searched through the databases of PubMed, EMBASE, Cochrane library, Chinese Biomedical Literature Database (CBM), China National Knowledge Infrastructure (CNKI), China Master Theses Full-text Database (CMTD), China Doctor/Master's Dissertations (CDMD) Full-text Database. The last search for all databases was updated to May 2016. We used the combined method

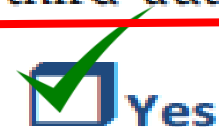
3. Do you think all the important, relevant studies were included?

updated to May 2016. We used the combined method of MeSH Term and free words by applying the following terms: acupoint injection, acupuncture, acupuncture and moxibustion, acupuncture points, acupuncture therapy, auricular acupuncture, auricular plaster, body acupuncture, coiling dragon needling, dermal needle, dry needling, ear acupuncture, ear seed pressure, Electro-acupuncture, embedding, embedding therapy, fire needle, moxibustion, *panlongci*, percussopuncture, point injection, pricking blood, scalp acupuncture, trigger points, meridians and chronic fatigue syndrome, chronic fatigue, fatigue syndrome, Myalgic Encephalopathy in PubMed, EMBASE, Cochrane library and relevant Chinese words in CBM and CNKI.

4. Did the review's authors do enough to assess the quality of the included studies?

Quality assessment

The quality assessment of all studies included in this review was independently evaluated by two reviewers (Wang TW and Xu C) using the Cochrane Collaborations tool [24]. Seven criteria were applied: (1) random sequence generation, (2) allocation concealment, (3) blinding of participants and personnel, (4) blinding of outcome assessment, (5) incomplete outcome data, (6) selective reporting and (7) other bias (defined as baseline data comparability). For each item, the evaluation was denoted as low, high or unclear risk according to the descriptions of the method in each study. Any disagreement was resolved by discussion with the third author (Xiong HY).



5. If the results of the review have been combined, was it reasonable to do so?

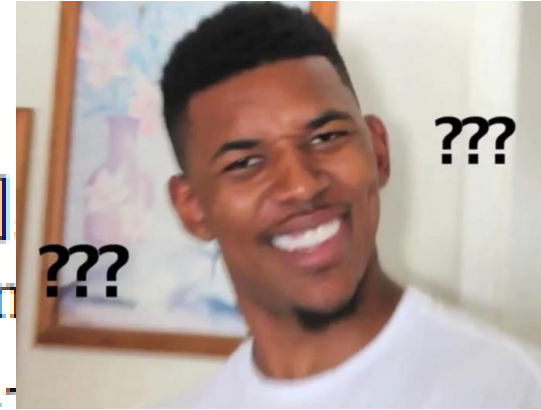
Traditional meta-analysis was adopted for direct comparison. Random effects model was adopted for overall and subgroup analysis if obvious heterogeneity existed, otherwise fixed effects model. Furthermore, both models were adopted to test the difference of the two models for sensitivity analysis. At the same time, sensitivity analysis was finished by removing any single trial in each group. Statistical heterogeneity was evaluated by the Cochran's Chi-squared test (with $P < 0.10$ indicating statistically significant heterogeneity) and the statistic I^2 [25] (The heterogeneity might not be important

低 (25%)、中 (50%)、高 (75%)

5. If the results of the review have been combined, was it reasonable to do so?

SAM versus Chinese herbal medicine

Twelve trials [17, 18, 31, 33, 38, 41, 44, 45, 48, 51, 54, 58] 951 participants (478 in experiment group and 473 in control) were included in this group. With only not important heterogeneity existed ($I^2 = 29.8\%$, $p = 0.15$), the pooled result of the 8 trials was performed with fixed effect model and the result (RR (95% CI), 1.22 (1.14–1.30)) showed that SAM had better effects than Chinese herbal medicine (Fig. 4). There was no publication bias after egger's test ($p = 0.82$).



Yes

Can't tell

No

IS THE TRIAL Valid?

Q1

- Did the review address a clearly focused question?



Q2

- Did the authors look for the right type of papers?



Q3

- Do you think all the important, relevant studies were included?



Q4

- Did the review's authors do enough to assess the quality of the included studies?



Q5

- If the results of the review have been combined, was it reasonable to do so?



Critical Appraisal Skills Programme (CASP)

Systematic Review Checklist

Are the results of the review valid? Q1~5

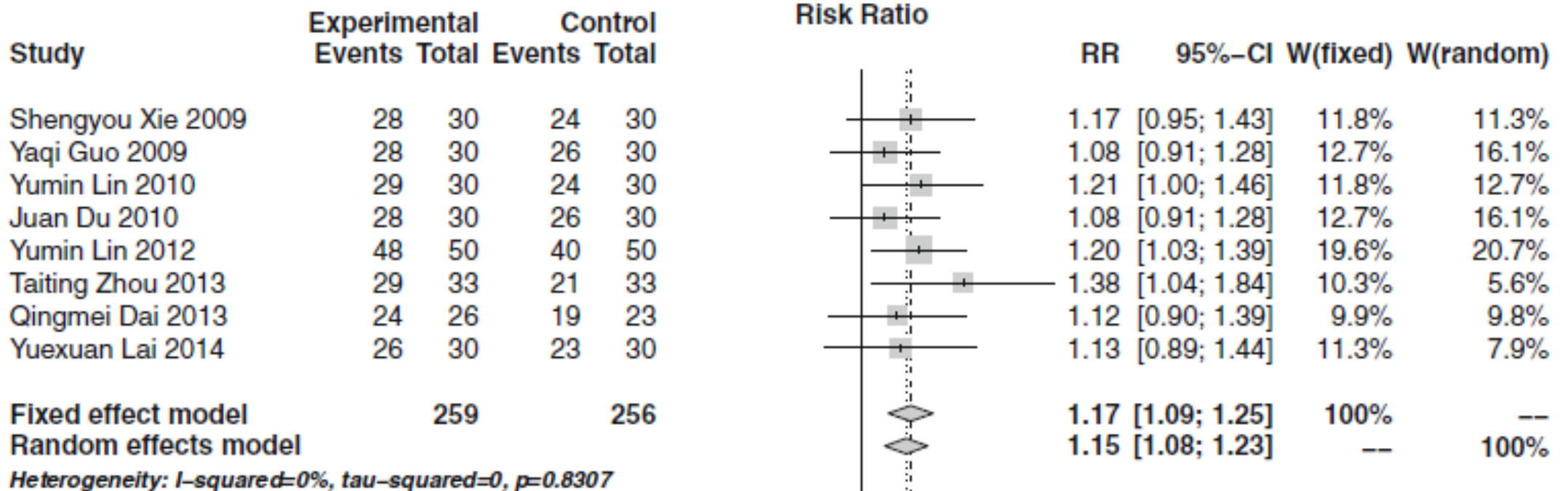


What are the results? Q6~7



Will the results help locally? Q8~10

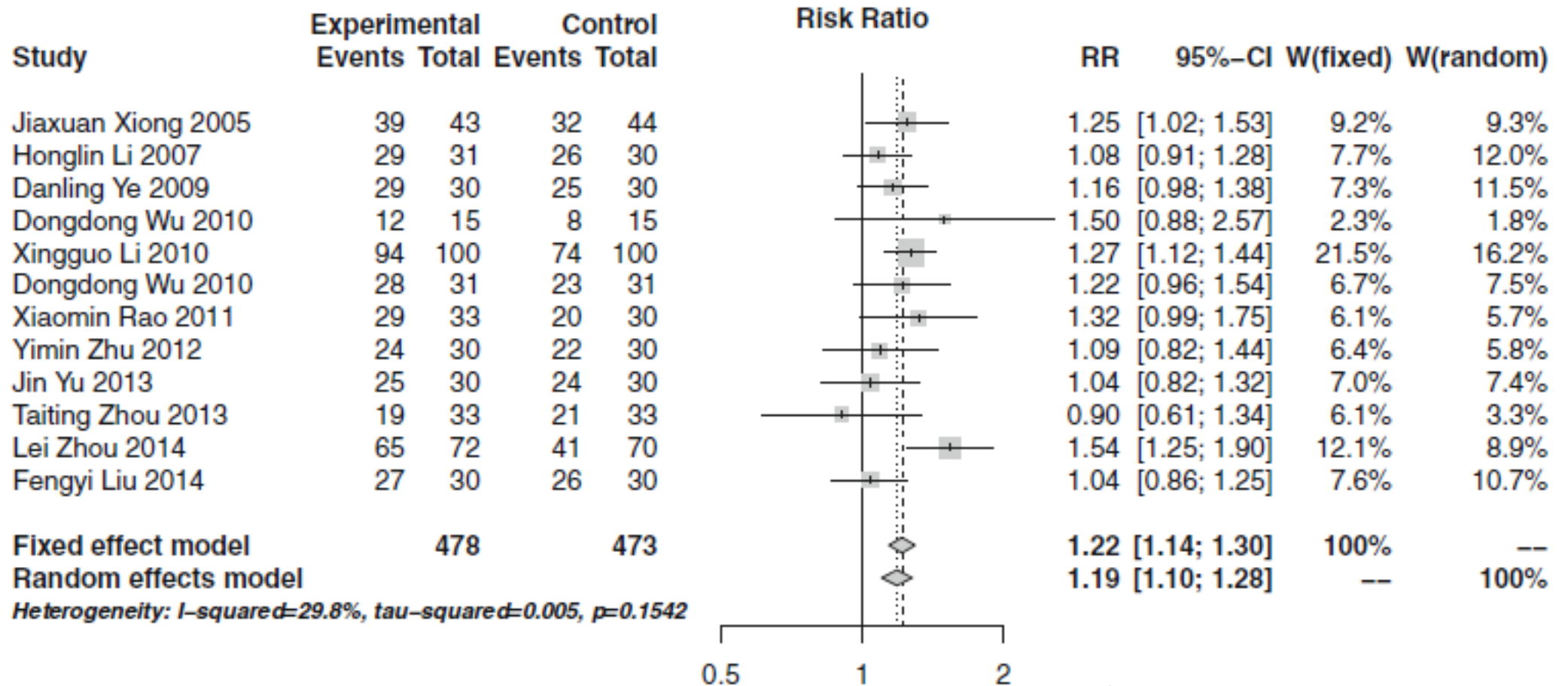
6. What are the overall results of the review?
7. How precise are the results?



Forest plot of CbAM versus Chinese herbal medicine



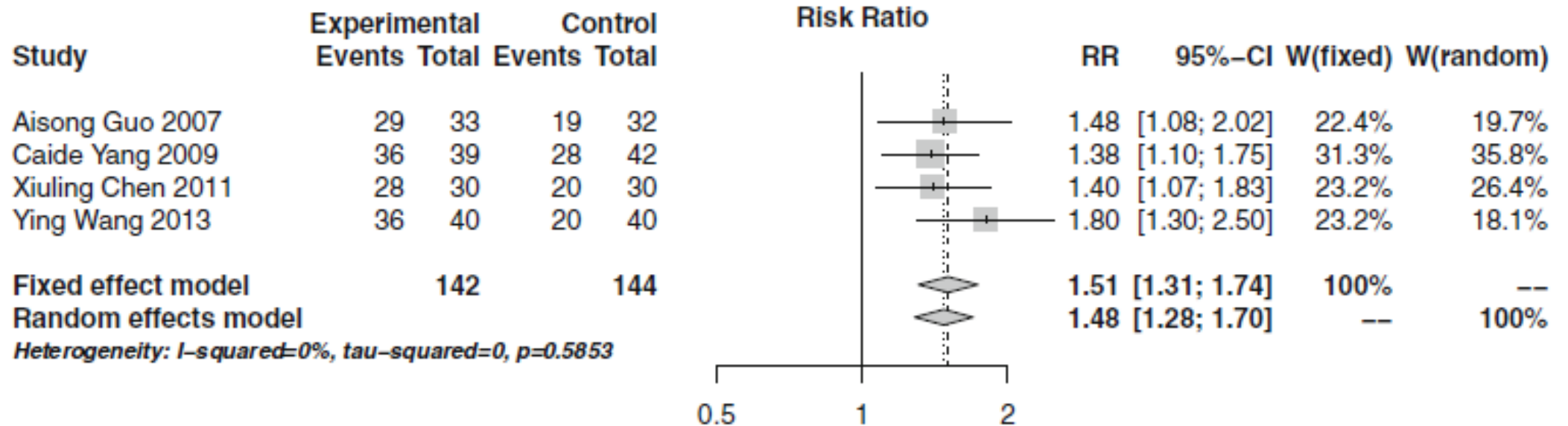
6. What are the overall results of the review?
7. How precise are the results?



Forest plot of SAM versus Chinese herbal medicine



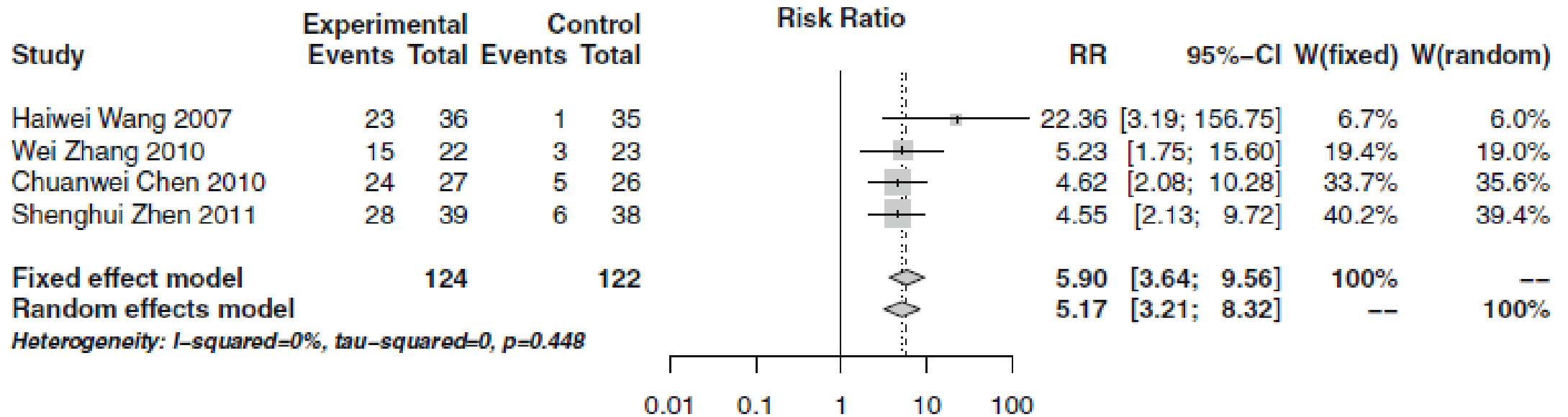
6. What are the overall results of the review?
7. How precise are the results?



Forest plot of SAM versus western medicine



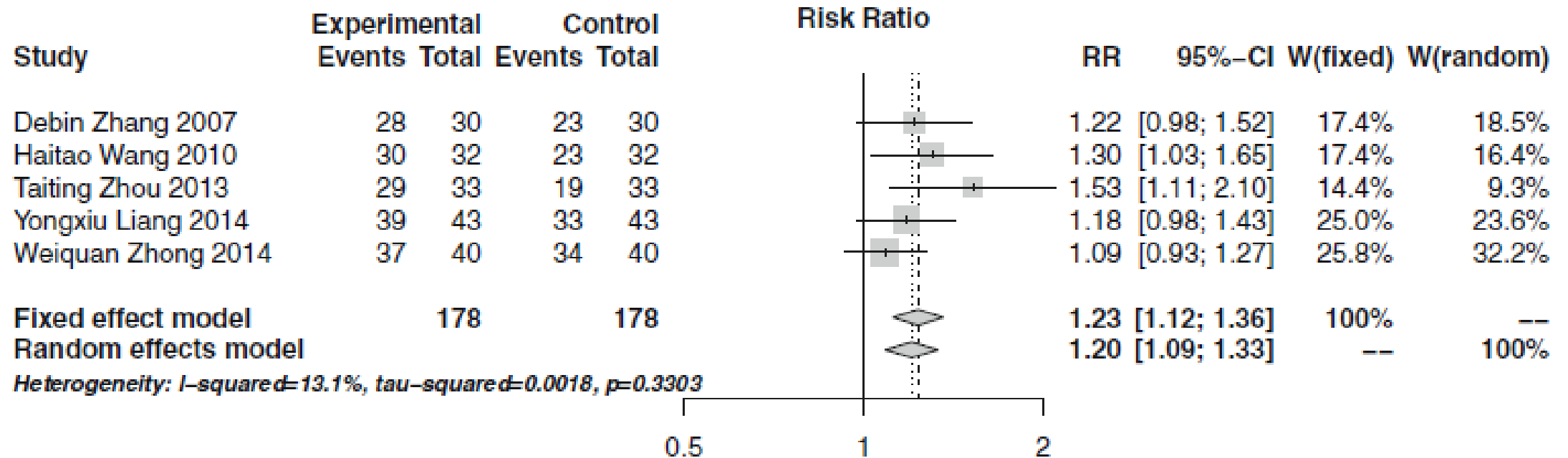
6. What are the overall results of the review?
7. How precise are the results?



Forest plot of SAM versus placebo treatment (sham-acupuncture)



6. What are the overall results of the review?
7. How precise are the results?



Forest plot of CbAM versus SAM



6. What are the overall results of the review?
7. How precise are the results?

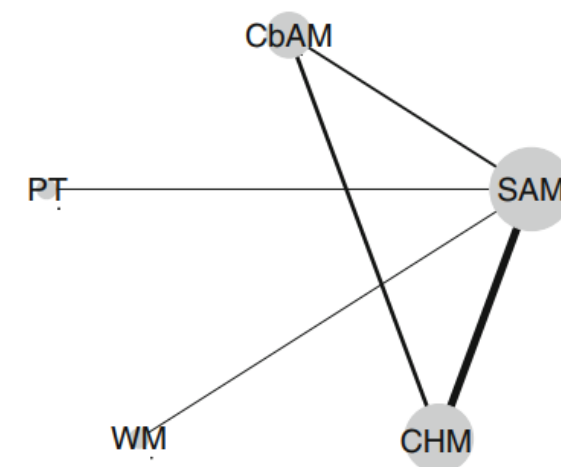


Fig. 8 Network of involved treatments. CbAM, combined acupuncture and moxibustion; SAM, single acupuncture or single moxibustion; CHM, Chinese herbal medicine; WM, western medicine; PT, placebo treatment (sham-acupuncture)

Table 1 Comparison of network meta-analysis and traditional meta-analysis

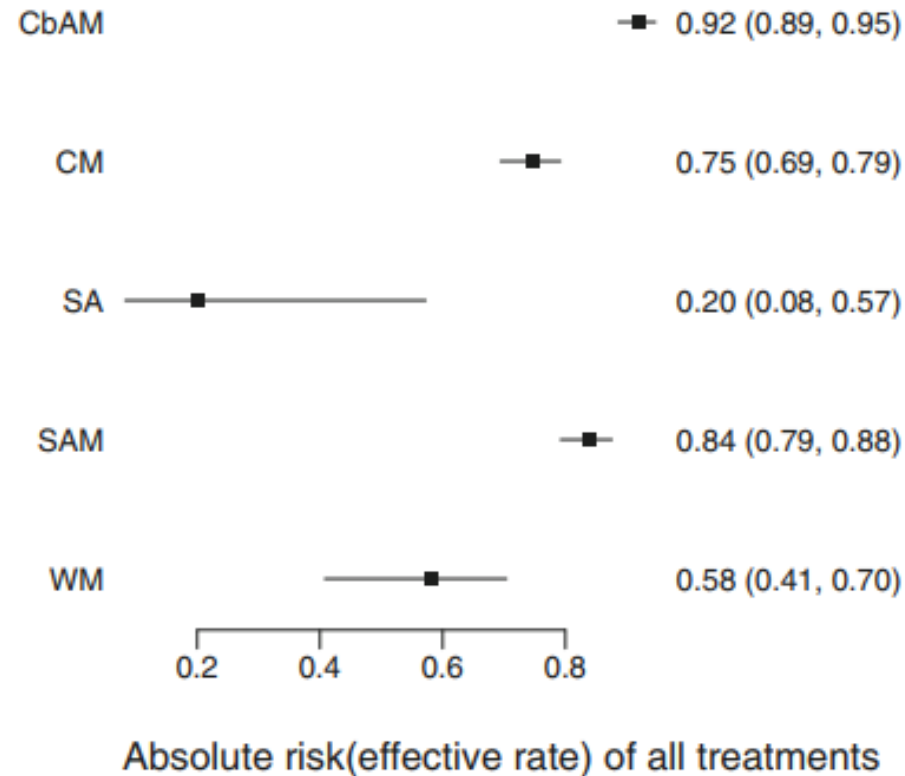
Treatment	CbAM		SAM		Chinese medicine		Western medicine		Placebo (Sham-acupuncture)	
	T-meta ^a	N-meta ^b	T-meta ^a	N-meta ^b	T-meta ^a	N-meta ^b	T-meta ^a	N-meta ^b	T-meta ^a	N-meta ^b
CbAM	-	-	1.23 (1.12–1.36)	1.10 (1.04–1.17)	1.17 (1.09–1.25)	1.23 (1.15–1.32)	-	1.68 (1.29–1.69)	-	5.84 (1.19–12.21)
SAM	-	0.91 (0.85–0.96)	-	-	1.22 (1.14–1.30)	1.12 (1.03–1.21)	1.51 (1.31–1.74)	1.53 (1.17–2.43)	5.90 (3.64–9.56)	5.31 (1.74–11.07)
Chinese medicine	-	0.81 (0.77–0.87)	-	0.89 (0.83–0.97)	-	-	-	1.20 (1.10–1.50)	-	4.00 (2.50–6.90)
Western medicine	-	0.62 (0.37–0.77)	-	0.68 (0.41–0.85)	-	0.76 (0.46–0.96)	-	-	-	3.20 (1.90–5.50)
placebo (sham-acupuncture)	-	0.21 (0.08–0.53)	-	0.24 (0.09–0.58)	-	0.26 (0.10–0.65)	-	0.37 (0.12–0.99)	-	-

^astands for traditional meta-analysis

^bstands for network meta-analysis



6. What are the overall results of the review?
7. How precise are the results?



6. What are the overall results of the review?
7. How precise are the results?

Adverse events

Of the conducted trials, adverse events happened in four studies [17, 31, 33, 42]. In total, there was fainting during acupuncture (6 cases), feeling of acid bilges on the back (6 cases), subcutaneous hematoma (1 case), burn during moxibustion (1 case). No serious adverse events happened.

Acupuncture point

The acupoints were chosen with two ways, constant point and constant point plus points based on the basis of symptoms. After analysis of points adopted in trial, we found *Walking Three Miles (ST36)*, *Spleen Locus (BL20)*, and *Liver Locus (BL18)* were the three points most commonly used (Additional file 2: Figure S1).



Critical Appraisal Skills Programme (CASP)

Systematic Review Checklist

Are the results of the review valid? Q1~5



What are the results? Q6~7



Will the results help locally? Q8~10

8. Can the results be applied to the local population?

We included 31 studies (Additional file 1: Table S1), all of these were conducted **in China** and published in Chinese. The sample size of these studies ranged from 30 to 200, and the total number of patients was 2255. The age of patients ranged from 18 to 78, and the duration of treatment was from 10 to 90 days.

 Yes Can't tell No

9. Were all important outcomes considered?

- What kinds of CHM and WM?
- What kinds of SA?
- CHM vs WM not included
- Network inconsistency
- Only four trials described blinding of participants (single or double)
- Effective rate was not a validated outcome and the definition could be subjective

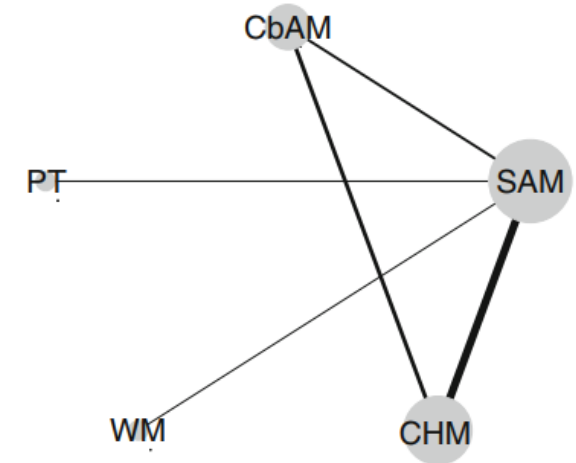


Fig. 8 Network of involved treatments. CbAM, combined acupuncture and moxibustion; SAM, single acupuncture or single moxibustion; CHM, Chinese herbal medicine; WM, western medicine; PT, placebo treatment (sham-acupuncture)

 Yes Can't tell No

10. Are the benefits worth the harms and costs?

Conclusions

In this systematic review, we evaluated the treatment effect of acupuncture and moxibustion comprehensively which were found to be more effective than Chinese herbal medicine, western medicine and placebo treatment (sham-acupuncture) in relieving symptoms. However, because of low quality evidence and heterogeneity, further studies are required to confirm this hypothesis.

Yes Can't tell No

Q6

- What are the overall results of the review?

Q7

- How precise are the results?

Q8

- Can the results be applied to the local population?



Q9

- Were all important outcomes considered?



Q10

- Are the benefits worth the harms and costs?



Step 4: Apply

- 用於病人身上

- 病人是否可以從該項治療中獲益？
研究結果顯示針灸與艾灸對慢性疲勞的治療效果優於純中藥治療、西藥治療與安慰劑的使用。
- 我們的病人與研究對象是否有差異？
研究結果適用於我們的病人嗎？
此治療技術上是否可行？
本研究對象全數來自中國人，沒有西方人。
治療技術上是可行的。
- 接受此治療需花費多少？
沒特別提及，針灸艾灸屬於，可負擔。
- 還有哪些替代方案？
SAM、CHM、western medicine...
- 病人的想法為何？
希望透過針灸與艾灸治療能讓自己精神比治療前好

Evidence	Expertise	Expectation
<ul style="list-style-type: none">• Result: improved• Quality: poor	<ul style="list-style-type: none">• Benefit vs. Risk Chinese people• Feasibility feasible• Cost affordable• Alternatives SAM、CHM、 western medicine...	<ul style="list-style-type: none">• 希望治療後精神優於治療前• 可接受此項治療

Step 5: Assess

- 稽核以上4步驟

- 審視Step 1-4，提供下次改善的依據
 - 雖然paper的quality不夠好，但仍具參考價值。
- 追蹤、評估病人的outcome
 - 針灸加艾灸的治療效果大於中草藥、西藥、與安慰劑

References

- Acupuncture and moxibustion for chronic fatigue syndrome in traditional Chinese medicine: a systematic review and meta-analysis. Wang T, Xu C, Pan K, Xiong H. BMC Complement Altern Med. 2017 Mar 23;17(1):163. doi: 10.1186/s12906-017-1647-x. Review.