

# 按摩是否能改善血液透析病人不寧腿症候群嚴重度與睡眠品質？

單位：洗腎中心

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# 大綱

- 臨床情境與問題
- 選用文獻
- 系統性文獻回顧-FAITH評讀
- 臨床應用

# 前言

- 不寧腿症候群 ( RLS ) 為血液透析病人常見的神經感覺運動障礙，盛行率約6.6%~80% ( Gopaluni et al., 2016 ) 。
- RLS常惡化於導致不適感與移動下肢的衝動，休息時並伴隨睡眠品質下降、焦慮與疲憊 ( Giannaki et al., 2017; Zhang et al., 2020 ) 。
- 藥物治療可能有副作用，部分藥物甚至惡化症狀，因此患者傾向採取輔助與整合療法 ( CIT ) ( Chaiard & Weaver, 2019; Vlasie et al., 2022 ) 。
- 按摩、指壓與反射療法為常見CIT，可能改善RLS症狀並提升睡眠品質 ( Döner & Taşçı, 2022 ) 。



RESTLESS LEG SYNDROME

# 單位現況

- 本單位設有總床數 73 床，截至 2025 年 7 月，門診透析患者共計 355 人。
- 臨床工作中，我們觀察到不少患者有主訴腿部不適，如腳麻、腳抽筋、以及影響睡眠的問題，因此常可見醫師處方如：鎮靜劑、肌肉鬆弛劑或助眠藥物。
- 這些症狀與「不寧腿症候群」( Restless Legs Syndrome, RLS ) 高度相關，但單位內尚未進行正式的 RLS 病人盛行率統計與藥物使用分析。根據臨床經驗推估，此症狀在本單位患者中的發生率應不低，顯示 RLS 在透析族群中可能被忽略，且缺乏系統性的非藥物介入策略。
- 因此，我們選擇以本研究報告探討「按摩、穴位按摩與反射療法」對透析病人 RLS 症狀的潛在改善效果，作為臨床未來照護計畫之參考依據。



哪一種方法可以 既低風險 又 容易執行  
且能改善不寧腿病人的症狀及睡眠?



# 選用文獻

Nursing Open

WILEY

NursingOpen Open Access

META-ANALYSIS **OPEN ACCESS**

## The Effect of Massage, Acupressure and Reflexology on Restless Legs Syndrome Severity and Sleep Quality in Patients Receiving Haemodialysis Treatment: A Systematic Review and Meta-Analysis

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2024 JOURNAL IMPACT  
FACTOR  
**2.3**

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<https://doi.org/10.1002/nop2.70135>



證據等級  
最高

2024  
JOURNAL  
IMPACT FACTOR  
2.3

發表年代  
最新:2025

# 文章背景說明

	研究	國家	干預方式	頻率與週期	單次時間	按摩油	施作人員	評估工具
1	Azimpour et al. (2019)	伊朗	足部按摩	每週3次，共4週	15分鐘/次	未使用	未提及	RLS評估量表
2	Bahrami et al. (2020)	伊朗	足部按摩	每週3次，共4週	10分鐘/次	未使用	未提及	RLS評估量表
3	Can Gürkan et al. (2022)	土耳其	足部反射按摩	每日一次，共10天	30分鐘/次	使用植物油（未詳述）	受訓護士	RLS評估量表
4	Ghanbari et al. (2022)	伊朗	穴位按摩	每週3次，共2週	20分鐘/次	未使用	未提及	PSQI、RLS評估量表
5	Khazaie et al. (2012)	伊朗	穴位按摩	每日一次，共10天	20分鐘/次	未使用	受訓護士	RLS評估量表
6	Mahdavi et al. (2020)	伊朗	足部按摩	每週3次，共4週	20分鐘/次	未使用	未提及	RLS評估量表
7	Nasiri et al. (2019)	伊朗	穴位按摩	每週3次，共4週	20分鐘/次	未使用	未提及	RLS評估量表
8	Oshvandi et al. (2021)	伊朗	穴位按摩	每日一次，共10天	20分鐘/次	未使用	受訓研究人員	PSQI、RLS評估量表
9	Rakhshandeh et al. (2015)	伊朗	足部按摩	每週3次，共4週	15分鐘/次	未使用	未提及	RLS評估量表
10	Sharifi et al. (2016)	伊朗	穴位按摩	每日一次，共2週	20分鐘/次	未使用	受訓護士	RLS評估量表
11	Tsai et al. (2022)	台灣	足部按摩	每週3次，共3週	15分鐘/次	橄欖油	研究人員	RLS評估量表
12	Vural et al. (2020)	土耳其	足部按摩	每日一次，共14天	20分鐘/次	未使用	護士	RLS評估量表

# 文章背景說明

- **共納入12篇文獻**
  - ✓ 都是RCT
  - ✓ 10 篇是在 伊朗進行的，有一篇來自 台灣，一篇來自 土耳其。
- **樣本數**:23人~80人有RLS診斷的長期洗腎病人
- **按摩位置**:足部至膝下。
- **介入方式**：
  - ✓8 篇研究採用 按摩療法
  - ✓2 篇研究採用 足部反射按摩
  - ✓2 篇研究採用 穴位指壓
- **精油種類**:有8篇研究有說明使用的，其中以薰衣草精油最常見。
- **介入療程**的時間範圍如下：
  - ✓最短為 3 週
  - ✓最長為 8 週
  - ✓每次療程時間從 10 分鐘到 45 分鐘不等
- **操作人員**:有 9 篇研究強調介入措施是由受過訓練、具經驗或認證的醫護人員執行。

# Appraisal sheets(FAITH)

- Appraisal Tool

- [統合分析 Meta-analysis]

- **步驟1：研究探討的問題為何 (PICO)**
- 步驟2：研究的品質如何 (內在效度)
- 步驟3：研究結果之意義為何 (效益)

# 步驟 1：系統性文獻回顧探討的問題為何？

## 研究族群 / 問題 (Population/ Problem) :

- hemodialysis (HD) patients with restless legs syndrome (RLS)

## 介入措施 (Intervention) :

- Massage, acupressure, or reflexology

## 比較 (Comparison) :

- Usual care

## 結果 (Outcomes) :

- Improve RLS severity (measured by the IRLSSG scale) and sleep quality

# Appraisal sheets(FAITH)

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- [統合分析 Meta-analysis]

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# FAITH快速評讀

## Find

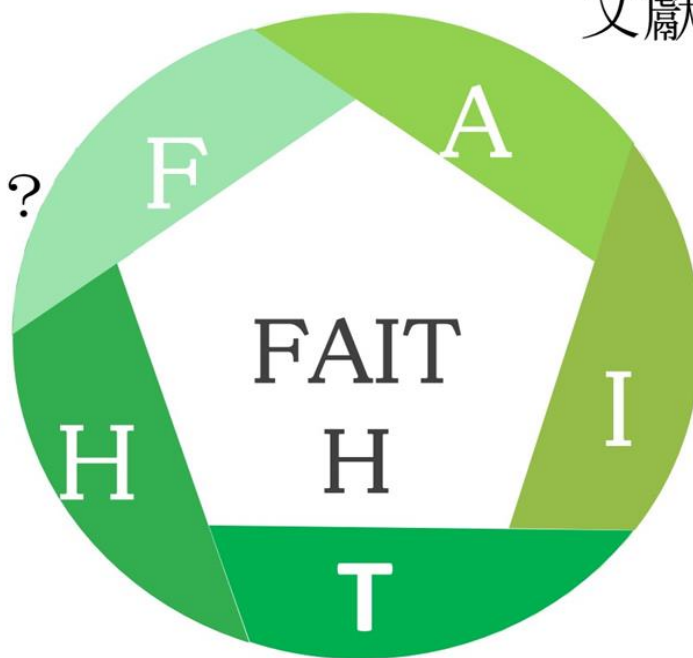
研究是否「找到」  
所有的相關證據？

## Appraisal

文獻是否經過  
嚴格「評讀」？

## Heterogeneity

試驗的結果是否  
相近-「異質性」？



## Included

是否只「納入」  
具良好效度的文章

## Total up

作者是否以表格和圖表「總結」試驗結果？

# 步驟 2：系統性文獻回顧的品質如何?(FAITH)

## • 【F】研究是否找到 (Find) 所有的相關證據？

良好的文獻搜尋至少應包括二個主要的資料庫(如：Medline, Cochrane 考科藍實證醫學資料庫, EMBASE 等)，並且加上文獻引用檢索(參考文獻中相關研究、Web of Science, Scopus或 Google Scholar)、試驗登錄資料等。文獻搜尋應不只限於英文，並且應同時使用 MeSH 字串及一般檢索詞彙(text words)。

### 2.3 | Search Strategy

To identify relevant studies, a systematic literature search was conducted on multiple databases including “Cochrane Central Register of Controlled Trials (CENTRAL)”, “ScienceDirect”, “Web of Science”, “EBSCO” and “PubMed”. The search was not limited by publication date. PICO headings were used to define search terms for the population, intervention, comparator and outcome. The search terms included variations of (1) “Restless leg syndrome” OR “Restless Legs Syndrome” OR “Willis-Ekbom disease” OR “RLS” OR “WED” OR “uremic RLS” OR “secondary RLS” AND (2) “Hemodialysis” AND (3) “Aromatherapy” OR “Aroma” OR “Massage” OR “Reflexology” OR “Acupressure” OR “Acupuncture” OR “Acupoint” (Data S2). Two authors independently screened the studies for inclusion, and all relevant studies were imported into the EndNote Citation Software X20 (Clarivate Analytics, Philadelphia, USA). The systematic literature search was conducted to ensure a comprehensive and unbiased selection of studies for the meta-analysis, using a standardised and replicable search strategy.

### 2.2 | Eligibility Criteria

This meta-analysis involved articles that were (a) performed on patients undergoing HD treatment, (b) applied massage, acupressure and reflexology, (c) reported the RLS severity and SQ as assessment outcome, (d) were written in English and (e) had a randomised controlled design. Studies that only provided abstracts or did not include both standard deviation (SD) and

- ✓ 至少兩個主要資料庫
- 搜尋策略使用關鍵字 (未提及有無使用 MESH term 或 text words)
- 審查所有文獻的參考文獻清單 (沒有描述有額外進行文獻引用檢索)
- 收錄的文獻只限制英語

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P.2



# 步驟 2：系統性文獻回顧的品質如何?(FAITH)

## • 【F】研究是否找到 (Find) 所有的相關證據？

在文章的方法(Methods)章節，可以找到詳細搜尋策略的說明，包括使用的名詞，結果(Results)章節中可以找到本篇系統性文獻回顧評估的摘要及全文文獻數目、文獻納入與排除的數量及原因。資料可能會以圖表或 PRISMA 的流程圖呈現。

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- ✓ 在文章的方法(Methods)章節
- ✓ 可以找到詳細搜尋策略的說明  
包括使用的名詞

P.3

# 步驟 2：系統性文獻回顧的品質如何?(FAITH)

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### 3.1 | Summary of Search Outcomes

Four databases were queried, yielding 2727 studies. After excluding 2381 repetitive studies, the remaining pool underwent initial screening based on titles and abstracts, resulting in the

exclusion of 334 studies that did not meet the criteria. Twelve studies underwent full-text review, leading to the inclusion of these in the meta-analysis (Figure 1).

- ✓ 在文章的結果(Results) 章節
- ✓ 可以找到評估的摘要及全文文獻數目、文獻納入與排除的數量及原因

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# 步驟 2：系統性文獻回顧的品質如何?(FAITH)

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### 2.2 | Eligibility Criteria

This meta-analysis involved articles that were (a) performed on patients undergoing HD treatment, (b) applied massage, acupressure and reflexology, (c) reported the RLS severity and SO as assessment outcome, (d) were written in English and (e) had a randomised controlled design. Studies that only provided abstracts or did not include both standard deviation (SD) and mean (M) values necessary to determine the effect size were not involved in this meta-analysis. Additionally, this meta-analysis were excluded grey literature sources, such as dissertations, letters, expert opinions, conference papers and non-peer-reviewed journal articles. Moreover, patients receiving peritoneal dialysis treatment were excluded from the study.

P.2

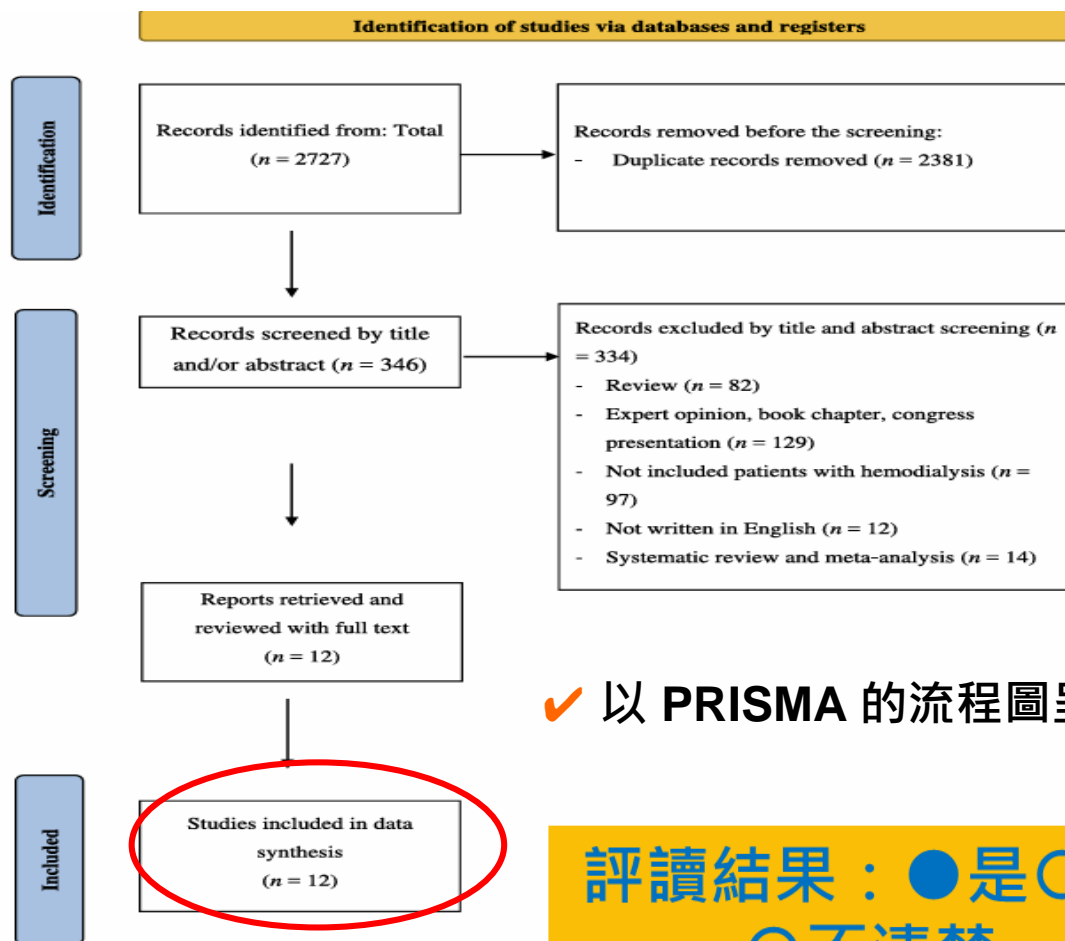
P.3

✓ 可以找到納入與排除的條件

# 步驟 2：系統性文獻回顧的品質如何?(FAITH)

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✓ 以 PRISMA 的流程圖呈現

評讀結果：●是○否  
○不清楚

FIGURE 1 | PRISMA flow diagram (Page et al. 2021).

# Appraisal FAITH-步驟 2: 系統性文獻回顧的品質如何

(A) 【A】-文獻是否經過嚴格評讀 應根據不同臨床問題的文章類型，選擇適合的評讀工具，並說明每篇研究的品質(如針對治療型的臨床問題，選用隨機分配、盲法、及完整追蹤的研究類型)。

## 2.5 | Risk of Bias and Quality Appraisal Assessment

Modified Jadad scale was used for evaluate the methodological quality (Oremus et al. 2001). The scale includes eight items related to withdrawal and dropout rate, exclusion and inclusion criteria, randomisation, blinding, adverse effects, procedures and statistical tests. Each item is scored as 'yes' or 'no', with 'no' scored as '0' and 'yes' scored as '1'. The total score for each study is obtained by summing the scores for each item, ranging from 0 (low) to 8 (high). A quality score of 3 or below were considered to be of 'low quality', while a score of 4 or above were considered to be of 'good quality'. Two researchers independently assessed the methodological quality of each study, and any inconsistencies were resolved through discussion and consensus.

✓ 以 **Modified Jadad scale** 查檢表獨立評讀納入文章的品質，（包含隨機化、盲法、退出與失訪率、納入與排除標準、統計方法等），分數 0 - 8 分，4 分以上視為品質良好。

➤ 兩人的評分或判斷有不一致的地方，就透過討論並達成共識來解決。

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# Appraisal FAITH-步驟 2: 系統性文獻回顧的品質如何

**(A)【A】-文獻是否經過嚴格評讀**應根據不同臨床問題的文章類型，選擇適合的評讀工具，並說明每篇研究的品質(如針對治療型的臨床問題，選用隨機分配、盲法、及完整追蹤的研究類型)。

The Cochrane risk of bias assessment tool were used to assess the risk of bias in the included studies (Corbett, Higgins, and Woolacott 2014). The Cochrane tool assesses six types of bias, including performance, selection, detection, reporting, attrition and other biases. Each type of bias is rated as high, unclear or low risk. A funnel plot was utilised to detect potential publication bias, which is indicated by an asymmetry in the plot. Also, publication bias was evaluated with the Egger regression test. Three researchers independently assessed the risk of bias of each study, and any discrepancies were resolved with discussion.

- ✓ 以 **Cochrane 偏倚風險評估工具** 來評估所納入研究的偏倚風險。
- ✓ 以 **漏斗圖 (funnel plot)**、**Egger 迴歸檢驗 (Egger regression test)** 來評估可能的出版偏倚。
  - 三位研究者分別、獨立地評估每一篇研究的偏倚風險 (例如選擇偏倚、執行偏倚、檢測偏倚等)
  - 如果三人的判斷有差異，就透過討論來解決分歧。

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# Appraisal FAITH-步驟 2: 系統性文獻回顧的品質如何

(A) 【A】-文獻是否經過嚴格評讀 應根據不同臨床問題的文章類型，選擇適合的評讀工具，並說明每篇研究的品質(如針對治療型的臨床問題，選用隨機分配、盲法、及完整追蹤的研究類型)。

## 3.3 | Quality Appraisal

The randomisation method was used in all studies. Blinding was used in some studies, double-blind in one study, and single-blind in five studies. Moreover, all studies meticulously outlined their inclusion/exclusion criteria, withdrawal rates and employed fitting statistical analyses. Notably, only seven studies documented adverse effects of the intervention, with none reporting any side effects. When considering the total scores, five studies (Amrollahi et al. 2022; Ghasemi et al. 2021; Hashemi, Hajbagheri, and Aghajani 2015; Mohammadi et al. 2018; Nasiri et al. 2019) scored 8 points, one study (Ajorpaz et al. 2020) scored 7 points, three studies (Döner and Taşcı 2022c; Oshvandi et al. 2021; Tsai et al. 2022) scored 6 points, two studies scored 5 points, and finally, one study (Azimpour et al. 2019) scored 4. All studies were of good quality as they had a quality score of 4 or more (Table 3).

### 在評讀品質結果(Results) 章節

- ✓ 所有研究的品質評分皆達 4 分以上。
- ✓ 因此皆被視為品質良好的研究根據品質評分結果。

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# Appraisal FAITH-步驟 2: 系統性文獻回顧的品質如何

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TABLE 3 | The evidence level and methodological qualities of studies.

Study	Was the research described as randomised?	Was the approach of randomisation appropriate?	Was the research described as blinding?	Was the approach of blinding appropriate?	Was there a presentation of withdrawals and dropouts?	Was there a presentation of the inclusion/exclusion criteria?	Was the approach used to assess adverse effects described?	Was the approach of statistical analysis described?	Total
Amrollahi et al. (2022)	1	1	1	1	1	1	1	1	8
Azimpour et al. (2019)	1	0	0	0	1	1	0	1	4
Döner and Taşçı (2022a)	1	1	0	0	1	1	1	1	6
Ghanbari et al. (2022)	1	1					0	1	5
Ghasemi et al. (2021)	1	1					1	1	8
Hashemi, Hajbagheri, and Aghajani (2015)	1	1					1	1	8
Ajorpaz et al. (2020)	1	1					0	1	7
Mohammadi et al. (2018)	1	1					1	1	8
Nasiri et al. (2019)	1	1				1	1	1	8
Oshvandi et al. (2021)	1	1	1	0	1	1	0	1	6
Shahgholian et al. (2016)	1	1	0	0	1	1	0	1	5
Tsai et al. (2022)	1	1	0	0	1	1	1	1	6

✓ 以 **Modified Jadad scale** 查檢表獨立評讀納入文章的品質，(包含隨機化、盲法、退出與失訪率、納入與排除標準、統計方法等)，分數 0-8 分，4 分以上視為品質良好。  
 ➤ 兩人的評分或判斷有不一致的地方，就透過討論並達成共識來解決。

# Appraisal FAITH-步驟 2: 系統性文獻回顧的品質如何

(A) 【A】-文獻是否經過嚴格評讀 應根據不同臨床問題的文章類型，選擇適合的評讀工具，並說明每篇研究的品質(如針對治療型的臨床問題，選用隨機分配、盲法、及完整追蹤的研究類型)。

## 3.4 | Risk of Bias Assessment

All studies had low selection bias. The blinding process of the included studies was evaluated in terms of practitioners of interventions, participants, researchers and data analysts. When the blinding status of the participants was examined, two studies stated that the patients were blinded whether they were in the intervention or the control group. While five of the studies found insufficient information on whether participants were blinded, five of the studies stated that participants were not blinded due to the type of intervention. Considering the blinding status of the researchers who evaluated the outcome, four studies had a high bias due to not blinding and three studies had an uncertain bias because they did not provide information. The remaining five studies stated that the researchers who collected the data and performed the analysis were blinded and there was low bias. Data collection and reporting of data were sufficient in all included studies, so there was a low risk of reporting bias and attrition bias (Figure 2). The Egger regression test findings indicated the absence of publication bias among the included studies ( $t = -1.99, p = 0.061$ ). Nevertheless, an asymmetry was observed in the funnel plot depicting these studies (Figure 3). This discrepancy underwent scrutiny via subgroup analysis and meta-regression analysis.

- ✓ 在評讀品質結果(Results) 章節
- ✓ 所有研究在選擇偏差 (selection bias) 方面皆為低風險。
  
- ✓ 所有納入的研究都進行了充分的資料收集和資料報告，報告偏差 (reporting bias) 與脫落偏差 (attrition bias) 方面皆為低風險。

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# Appraisal FAITH-步驟 2: 系統性文獻回顧的品質如何

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✓ 以 **Cochrane 偏倚風險評估工具** 來評估所納入研究的偏倚風險。

Note. + low risk of bias, ? : unclear risk of bias, - : high risk of bias

Author (Year)	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Arrollahi et al. (2021)	+	+	?	+	+	+	+
Azimpour et al. (2019)	+	+	-	-	+	+	+
Döner ve Taşçı (2022)	+	+	?	-	+	+	+
Ghanbari et al. 2022	+	+	?	?	+	+	+
Ghasemi et al. (2021)	+	+	-	+	+	+	+
Hashemi et al. (2015)	+	+	-	+	+	+	+
Mirbagher Aljorpoz et al. (2019)	+	+	-	+	+	+	+
Mohammadi et al. (2018)	+	+	+	-	+	+	?
Nasiri et al. (2019)	+	+	+	+	+	+	+
Oshvandi et al. (2021)	+	+	?	?	+	+	+
Shahgholian et al. (2016)	+	+	?	?	+	+	+
Tsal et al. (2022)	+	+	-	-	+	+	+

Note. + low risk of bias, ? : unclear risk of bias, - : high risk of bias

FIGURE 2 | Risk of bias assessment for included studies.

# Appraisal FAITH-步驟 2: 系統性文獻回顧的品質如何

(A) 【A】-文獻是否經過嚴格評讀 應根據不同臨床問題的文章類型，選擇適合的評讀工具，並說明每篇研究的品質(如針對治療型的臨床問題，選用隨機分配、盲法、及完整追蹤的研究類型)。

P.17

high bias due to not blinding and three studies had an uncertain bias because they did not provide information. The remaining five studies stated that the researchers who collected the data and performed the analysis were blinded and there was low bias. Data collection and reporting of data were sufficient in all included studies, so there was a low risk of reporting bias and attrition bias (Figure 2). The Egger regression test findings indicated the absence of publication bias among the included studies ( $t = -1.99, p = 0.061$ ). Nevertheless, an asymmetry was observed in the funnel plot depicting these studies (Figure 3). This discrepancy underwent scrutiny via subgroup analysis and meta-regression analysis.

- ✓ 在評讀品質結果(Results) 章節
- ✓ Egger regression test 顯示，納入的研究之間不存在發表偏誤 ( $t = -1.99, p = 0.061$ )。
- ✓ 漏斗圖中觀察到不對稱現象。
- ✓ 進一步透過亞組分析 (subgroup analysis) 和統合回歸分析 (meta-regression analysis) 進行檢視。

# Appraisal FAITH-步驟 2: 系統性文獻回顧的品質如何

(A) 【A】-文獻是否經過嚴格評讀 應根據不同臨床問題的文章類型，選擇適合的評讀工具，並說明每篇研究的品質(如針對治療型的臨床問題，選用隨機分配、盲法、及完整追蹤的研究類型)。

P.17

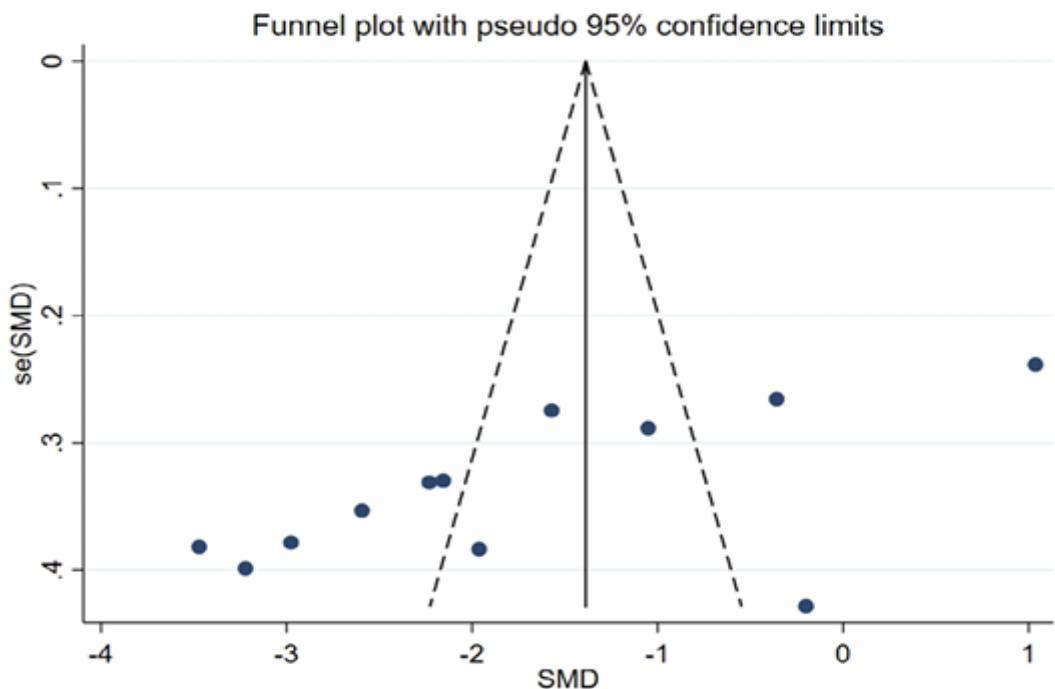


FIGURE 3 | Funnel plot for publication bias.

- 漏斗圖 (funnel plot)：不對稱
  - ◆ 透過亞組分析 (subgroup analysis) 與統合迴歸分析 (meta-regression analysis) 進一步檢驗。
    - 結果：沒有出版偏倚的足夠關聯性。
- Egger 迴歸檢驗 (Egger regression test) :  $t = -1.99$ ,  $p = 0.061$  (大於 0.05)，沒有達到統計顯著，沒有足夠證據斷定存在出版偏倚。

✓ 以漏斗圖 (funnel plot)、Egger 迴歸檢驗 (Egger regression test) 來評估可能的出版偏倚。

評讀結果：●是○否  
○不清楚

# Included FAITH-步驟 2：系統性文獻回顧的品質如何(I)

## 【I】是否只納入 (Included) 具良好效度的文章？

僅進行文獻判讀是不足夠，系統性文獻回顧只納入至少要有一項研究結果是極小偏誤的試驗。

### 2.3 | Search Strategy

To identify relevant studies, a systematic literature search was conducted on multiple databases including “Cochrane Central Register of Controlled Trials (CENTRAL)”, “ScienceDirect”, “Web of Science”, “EBSCO” and “PubMed”. The search was not limited by publication date. PICO headings were used to define search terms for the population, intervention, comparator and outcome. The search terms included variations of (1) “Restless leg syndrome” OR “Restless Legs Syndrome” OR “Willis-Ekbom disease” OR “RLS” OR “WED” OR “uremic RLS” OR “secondary RLS” AND (2) “Hemodialysis” AND (3) “Aromatherapy” OR “Aroma” OR “Massage” OR “Reflexology” OR “Acupressure”

OR “Acupuncture” OR “Acupoint” (Data S2). Two authors independently screened the studies for inclusion, and all relevant studies were imported into the EndNote Citation Software X20 (Clarivate Analytics, Philadelphia, USA). The systematic literature search was conducted to ensure a comprehensive and unbiased selection of studies for the meta-analysis, using a standardised and replicable search strategy.

- ✓ 有兩位作者獨立 (independently) 去篩選符合納入條件的研究。

# Included FAITH-步驟 2：系統性文獻回顧的品質如何(I)

## 【I】是否只納入 (Included) 具良好效度的文章？

僅進行文獻判讀是不足夠，系統性文獻回顧只納入至少要有一項研究結果是極小偏誤的試驗。

### 2.4 | Data Extraction

P.3

After importing all the studies into the Endnote X20, the authors reviewed them to remove duplicates. Subsequently, the studies were screened based on their titles and abstracts by two researchers who assessed them against the exclusion and inclusion criteria. Subsequently, the full-text versions of the selected studies were independently evaluated by the researchers according to the exclusion and inclusion criteria. To standardise the evaluation process, the researchers created a form that included various study characteristics such as the first author, publication date, country, HD treatment time, RLS criteria, gender,

- ✓ 兩位研究者先看標題與摘要判斷，是否符合納入與排除條件。
- ✓ 對初步符合條件的文獻，再看全文進行獨立評估。
- ✓ 若有不一致之處，則由作者之間透過討論加以解決。

P.9

age, sample size, intervention strategies, duration of interventions, massage oil information, training providers, control strategies, scales and assessment times. Inconsistencies in the data achieved from the articles were resolved with discussion among the authors.

評讀結果：●是○否  
○不清楚

# Total up FAITH-步驟 2: 系統性文獻回顧的品質如何(I)

【T】作者是否以表格和圖表「總結」(Total up)試驗結果？

應該用至少 1 個摘要表格呈現所納入的試驗結果。若結果相近，可針對結果進行統合分析 (meta-analysis)，並以「森林圖」(forest plot) 呈現研究結果，最好再加上異質性分析。

## 3.5 | Outcomes

P.17 The RLS severity of patients was evaluated with ‘The International RLS Study Group RLS rating scale for severity’. Assessing the impact of massage, reflexology and acupressure

interventions on RLS severity in HD patients revealed significant heterogeneity among the 12 studies ( $I^2 = 95.1\%$ ;  $p < 0.001$ ), prompting the adoption of a random effects model. Among these, nine studies indicated a notable reduction in RLS severity within the intervention group compared to the control group following massage and acupressure interventions. The combined results showed that massage and acupressure intervention provided a significant decrease in RLS severity in the intervention group compared to the control group (SMD =  $-1.388$ ; 95% CI =  $-1.570$ ,  $-1.205$ ;  $Z = 14.93$ ,  $p < 0.001$ ; Figure 4). The SQ was assessed using the ‘Pittsburgh sleep quality index’ in only three of the studies (Azimpour et al. 2019; Ghanbari et al. 2022; Oshvandi et al. 2021). The random effects model was applied in this study because studies had a high degree of heterogeneity ( $I^2 = 97\%$ ;  $p < 0.001$ ). The combined results revealed that massage and acupressure intervention had no effect on the SQ in the intervention group compared to the control group (SMD =  $-1.100$ ; 95% CI =  $-3.391$ ,  $1.191$ ;  $Z = 0.94$ ,  $p = 0.347$ ; Figure 5).

## 結果顯示：

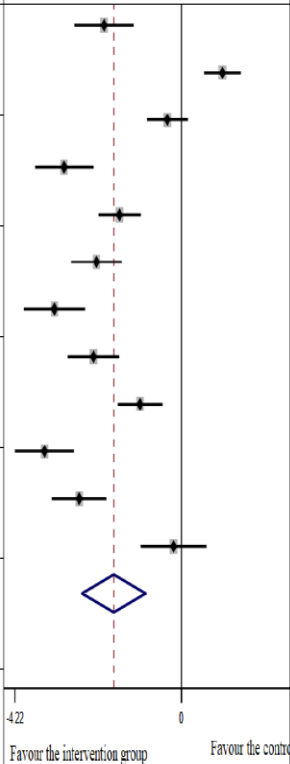
- ✓ 按摩與穴位指壓能顯著減輕介入組的 RLS 嚴重程度 ( SMD =  $-1.388$  ; 95% CI =  $-1.570$  至  $-1.205$  ;  $Z = 14.93$  ,  $p < 0.001$  )
- ✓ 按摩與穴位指壓對睡眠品質無顯著影響 ( SMD =  $-1.100$  ; 95% CI =  $-3.391$  至  $1.191$  ;  $Z = 0.94$  ,  $p = 0.347$  ) 。

# Total up FAITH-步驟 2: 系統性文獻回顧的品質如何(I)

【T】作者是否以表格和圖表「總結」(Total up) 試驗結果？

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Study	Intervention			Control			SMD (95% CI)	Weight
	Mean	SD	Total	Mean	SD	Total		
P.18								
Amrollahi et al. (2021)	9.4	7.44	20	23.3	6.73	21	-1.962 (-2.713, -1.211)	5.87
Azimpour et al. (2019)	15.5	2.43	40	12.82	2.72	40	1.037 (0.569, 1.504)	15.17
Döner ve Taşçı (2022)	14.06	6.92	31	16.62	7.38	27	-0.359 (-0.879, 0.162)	12.25
Ghanbari et al. (2022)	6.8	5.95	30	19.46	.89	30	-2.976 (-3.717, -2.235)	6.04
Ghasemi et al. (2021)	13.2	4.88	35	19.51	2.90	35	-1.571 (-2.109, -1.034)	11.46
Hashemi et al. (2015)	12.41	5.49	29	23.23	4.52	30	-2.155 (-2.801, -1.510)	7.95
Mirbagher Ajorpaz et al. (2019)	9.54	4.64	29	23.91	4.28	30	-3.222 (-4.003, -2.440)	5.43



Mohammadi et al. (2018)	20.54	1.59	30	24.04	1.81	30	-2.231 (-2.879, -1.582)	7.88
Nasiri et al. (2019)	14.77	5.9	27	20.78	5.54	28	-1.051 (-1.616, -0.486)	10.38
Oshvandi et al. (2021)	3.85	2.8	35	21.22	6.5	35	-3.471 (-4.219, -2.723)	5.92
Shahgholian et al. (2016)	12.5	6.3	30	28.43	5.98	30	-2.594 (-3.286, -1.902)	6.93
Tsai et al. (2022)	23.71	6.11	14	25.11	8.21	9	-0.200 (-1.040, 0.639)	4.70
Overall							-1.388 (-1.570, -1.205)	100.00

Test for overall effect:  $Z$ -Value = 14.93,  $p$ -value < 0.001  
 Heterogeneity:  $I^2 = 95.1\%$ ,  $df = 11$ ,  $Chi^2 = 222.26$ ,  $p$ -Value < 0.001

JRE 4 | Forest plot for the RLS severity of the intervention and the control group.

**12篇文獻總體結果 ( Overall) ( SMD = -1.388 , p < 0.001)**  
**按摩與指壓對減輕 RLS 嚴重度 有顯著效果**

# Total up FAITH-步驟 2: 系統性文獻回顧的品質如何(I)

**[T]** 作者是否以表格和圖表「總結」(Total up) 試驗結果？

應該用至少 1 個摘要表格呈現所納入的試驗結果。若結果相近，可針對結果進行統合分析 (meta-analysis)，並以「森林圖」(forest plot) 呈現研究結果，最好再加上異質性分析。

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Study	Intervention			Control			SMD (95% CI)	Weight	
	Mean	SD	Total I	Mean	SD	Total			
Azimpour et al. (2019)	9.22	3.48	40	8.43	3.19	40	-0.237 (-0.203, 0.676)	34.05	
Ghanbari et al. (2022)	9.97	1.4	30	14.57	1.14	30	-3.603 (-4.431, -2.775)	32.99	
Tsai et al. (2022)	12.43	4.03	14	12.33	4.18	9	0.024 (-0.813, 0.862)	32.96	
<b>Overall</b>			84			79	-1.100 (-3.391, 1.191)	100.00	
<b>Test for overall effect: Z-Value = 0.94, p-value = 0.347</b>									
<b>Heterogeneity: <math>I^2 = 97.0\%</math>, <math>df=2</math> <math>Chi^2 = 66.20</math>, p-Value &lt; 0.001</b>									

FIGURE 5 | Forest plot for the sleep quality of the intervention and the control group.

**3篇文獻總體結果 (Overall) ( SMD = -1.100 · p = 0.347)**  
 按摩與穴位指壓對睡眠品質 **無顯著影響**

評讀結果：●是 ○否  
 ○不清楚

# Heterogeneity

## FAITH-步驟 2: 系統性文獻回顧的品質如何(I)

### 【H】 - 試驗的結果是否相近 - 異質性 (Heterogeneity) ?

在理想情況下，**各個試驗的結果應相近或具同質性**，若具有異質性，作者應評估差異是否顯著 (卡方檢定)。根據每篇個別研究中不同的 PICO 及研究方法，**探討造成異質性的原因**。

#### 3.5 | Outcomes

The RLS severity of patients was evaluated with 'The International RLS Study Group RLS rating scale for severity'. Assessing the impact of massage, reflexology and acupressure interventions on RLS severity in HD patients revealed significant heterogeneity among the 12 studies ( $I^2 = 95.1\%$ ;  $p < 0.001$ ), prompting the adoption of a random effects model. Among these, nine studies indicated a notable reduction in RLS severity within the intervention group compared to the control group following massage and acupressure interventions. The combined results showed that massage and acupressure intervention provided a significant decrease in RLS severity in the intervention group compared to the control group (SMD = -1.388; 95% CI = -1.570, -1.205;  $Z = 14.93$ ,  $p < 0.001$ ; Figure 4). The SQ was assessed using the 'Pittsburgh sleep quality index' in only three of the studies (Azimpour et al. 2019; Ghanbari et al. 2022; Oshvandi et al. 2021). The random effects model was applied in this study because studies had a high degree of heterogeneity ( $I^2 = 97\%$ ;  $p < 0.001$ ). The combined results revealed that massage and acupressure intervention had no effect on the SQ in the intervention group compared to the control group (SMD = -1.100; 95% CI = -3.391, 1.191;  $Z = 0.94$ ,  $p = 0.347$ ; Figure 5).

血液透析患者按摩與穴位指壓對 RLS 嚴重度的影響:12篇研究間呈現顯著異質性 ( $I^2 = 95.1\%$ ;  $p < 0.001$ )，因此採用隨機效應模型進行統合分析。

血液透析患者按摩與穴位指壓對睡眠品質的改善:3篇研究間現高度異質性 ( $I^2 = 97\%$ ;  $p < 0.001$ )，故同樣採用隨機效應模型分析。

P.17

# Heterogeneity

## FAITH-步驟 2: 系統性文獻回顧的品質如何(I)

### 【H】 - 試驗的結果是否相近 - 異質性 (Heterogeneity) ?

在理想情況下，各個試驗的結果應相近或具同質性，若具有異質性，作者應評估差異是否顯著 (卡方檢定)。根據每篇個別研究中不同的 PICO 及研究方法，探討造成異質性的原因。

### 3.6 | Subgroup Analysis

The type of intervention was divided into three subgroups: massage, reflexology and acupressure. In the subgroup analysis, it was determined that massage and acupressure reduced the severity of RLS as a result of the intervention, while reflexology had no effect. The HD treatment time of patients in the studies was divided into two subgroups less than 6 months and more than or equal to 6 months. There was no difference between the groups ( $t = -1.23$ ,  $p = 0.246$ ), and the severity of RLS was significantly reduced as a result of the intervention in both groups. Studies were divided into two according to whether or not to use oil in the intervention in the studies. As a result of the analysis, it was stated that the severity of RLS decreased as a result of the intervention in studies using oil. Considering the duration of the intervention in the studies, two subgroups were formed according to the duration of the intervention as subgroups less than 4 weeks and more than or equal to 4 weeks, and the severity of RLS was significantly reduced as a result of the intervention in both groups. Studies were divided into two subgroups according to the duration of the session, as less than 15 min and more than or equal to 15 min. In the analysis, RLS severity was significantly reduced as a result of the intervention in studies that

intervened for more than 15 min per session (SMD = -2.288; 95% CI = -3.071, -1.504;  $Z = 5.72$ ,  $p < 0.001$ ), while studies that performed less than 15 min did not show any effect (SMD = -0.939; 95% CI = -2.174, 0.295;  $Z = 1.49$ ,  $p = 0.136$ ; Table 4).

高異質性 ( $I^2 = 95.1\%$  及  $97\%$ )  
原因探討

### subgroup analysis:

1. Type of intervention
2. HD treatment duration
3. Use of oil
4. Duration of the Intervention
5. Duration of the Session

評讀結果: ○是 ●否  
○不清楚

P.17

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# 評讀總表

系統性文獻回顧品質	評讀結果
研究是否找到(Find) 所有的相關證據？	是
文獻是否經過嚴格評讀(Appraisal)？	是
是否只納入(Included)具良好效度的文章？	是
作者是否以表格和圖表「總結」(Total up)試驗結果？	是
試驗的結果是否相近-異質性(Heterogeneity)？	否

# Appraisal sheets(FAITH)

- Appraisal Tool

- [統合分析 Meta-analysis]

- 步驟1：研究探討的問題為何 (PICO)
- 步驟2：研究的品質如何 (內在效度)
- **步驟3：研究結果之意義為何 (效益)**

# 步驟 3：研究結果之意義為何 (效益)

## 3.5 | Outcomes

P.17 The RLS severity of patients was evaluated with ‘The International RLS Study Group RLS rating scale for severity’. Assessing the impact of massage, reflexology and acupressure interventions on RLS severity in HD patients revealed significant heterogeneity among the 12 studies ( $I^2 = 95.1\%$ ;  $p < 0.001$ ), prompting the adoption of a random effects model. Among these, nine studies indicated a notable reduction in RLS severity within the intervention group compared to the control group following massage and acupressure interventions. The combined results showed that massage and acupressure intervention provided a significant decrease in RLS severity in the intervention group compared to the control group (SMD = -1.388; 95% CI = -1.570, -1.205;  $Z = 14.93$ ,  $p < 0.001$ ; Figure 4). The SQ was assessed using the ‘Pittsburgh sleep quality index’ in only three of the studies (Azimpour et al. 2019; Ghanbari et al. 2022; Oshvandi et al. 2021). The random effects model was applied in this study because studies had a high degree of heterogeneity ( $I^2 = 97\%$ ;  $p < 0.001$ ). The combined results revealed that massage and acupressure intervention had no effect on the SQ in the intervention group compared to the control group (SMD = -1.100; 95% CI = -3.391, 1.191;  $Z = 0.94$ ,  $p = 0.347$ ; Figure 5).

## 結果顯示：

- ✓ 按摩與穴位指壓能顯著減輕介入組的 RLS 嚴重程度 ( SMD = -1.388 ; 95% CI = -1.570 至 -1.205 ;  $Z = 14.93$  ,  $p < 0.001$  )
- ✓ 按摩與穴位指壓對睡眠品質無顯著影響 ( SMD = -1.100 ; 95% CI = -3.391 至 1.191 ;  $Z = 0.94$  ,  $p = 0.347$  ; 見圖5 ) 。

# 結論



1. 按摩與穴位按壓可有效減輕不寧腿症狀（RLS）。
2. 反射療法未顯示顯著效果
3. 使用精油的研究顯示出更佳效果。
4. 介入療程時間越長、效果越佳。

**透析中按摩 能改善透析病人不寧腿的症狀**

# 限制

僅納入英文與土耳其文文獻，可能導致文獻遺漏  
( publication bias )。

納入研究之介入方式、頻率、持續時間、評估工具皆不一致，  
導致統合分析中出現高度異質性 (  $I^2$  高達 95~97% )。

樣本數相對較小

多數研究集中於特定地區(伊朗)，可能無法代表所有文化與醫療背景。

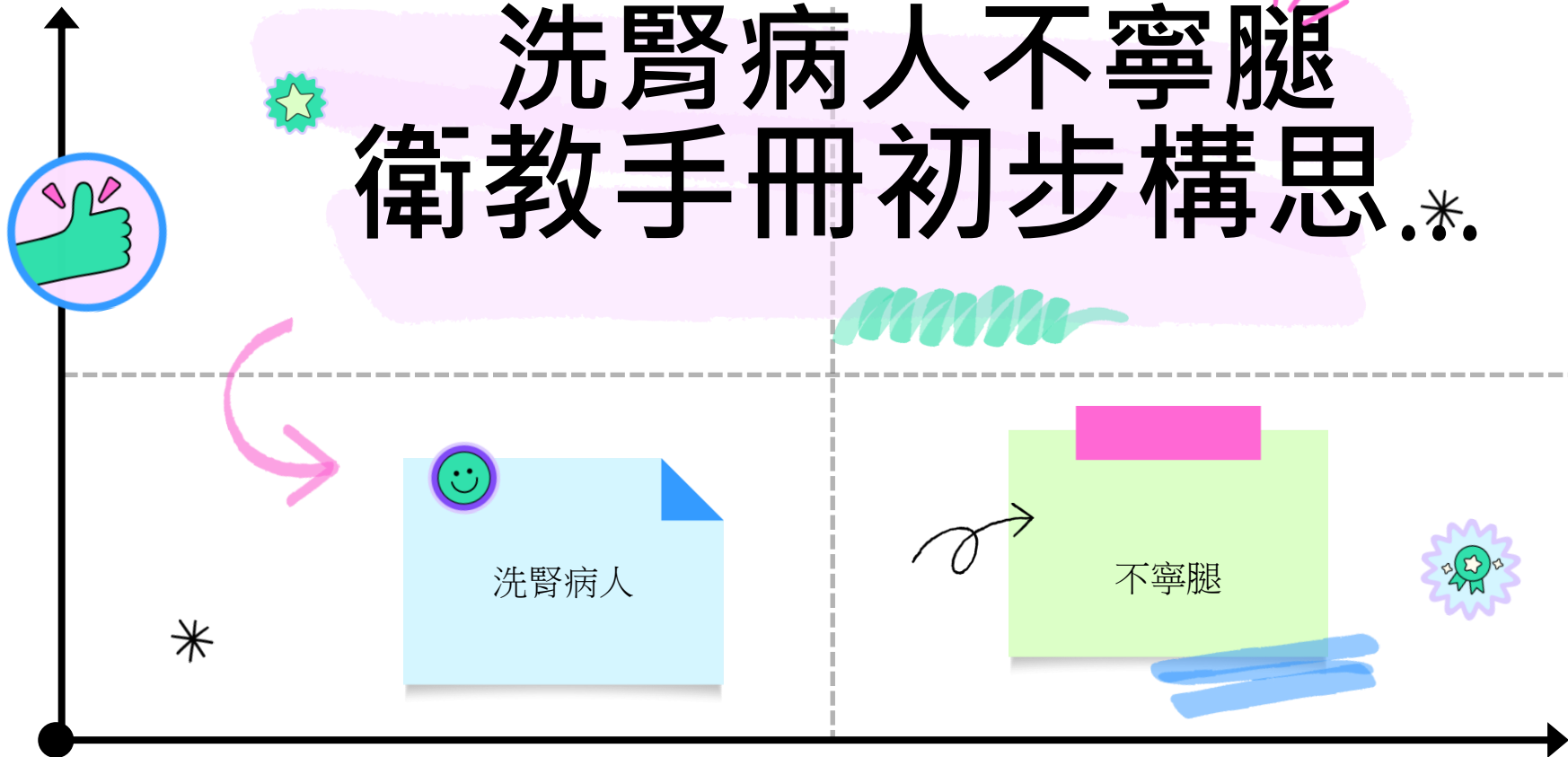
# 臨床應用.....

- ✓ 按摩與穴位指壓屬於**低成本、易取得、容易學習**的介入方式。
- ✓ 此類療法**副作用風險低**，病人亦可**自行操作**。也可訓練給**照護者或家屬**，以便於在家中或醫療機構中執行。
- ✓ 規律應用有助於**改善血液透析病人的生活品質與減輕不寧腿症候群（RLS）**症狀。
- ✓ 提供**正確技巧的衛教單張**，提升臨床應用的效果。



# 實施於臨床的設計構想.....

# 洗腎病人不寧腿 衛教手冊初步構思





臺北市立萬芳醫院 - 委託臺北醫學大學辦理

Taipei Municipal Wanfang Hospital (Managed by Taipei Medical University)

洗腎中心



# 衛教概覽



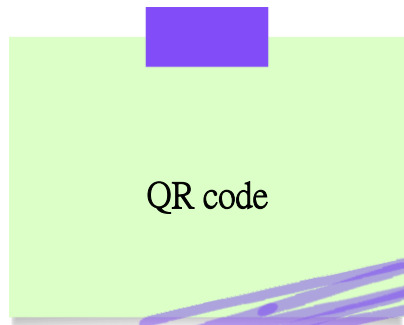
HD的高盛行率與特  
殊病理生理



HD藥物代謝改變



HD衛教資源



QR code



# HD的高盛行率 與特殊病理生理

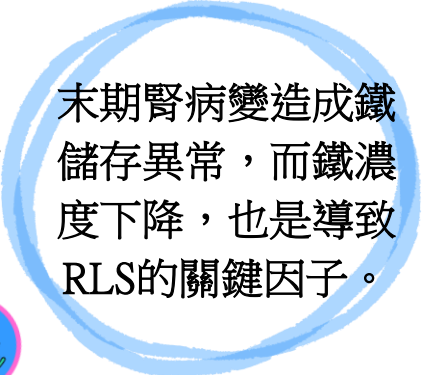


洗腎病人中RLS盛行率  
高達20~62%  
遠高於一般族群  
(約5~10%)。

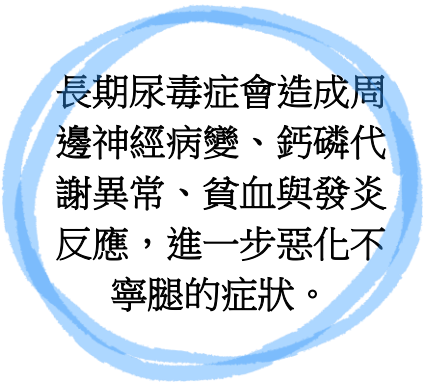
盛行率



特殊病理



末期腎病變造成鐵  
儲存異常，而鐵濃  
度下降，也是導致  
RLS的關鍵因子。



長期尿毒症會造成周  
邊神經病變、鈣磷代  
謝異常、貧血與發炎  
反應，進一步惡化不  
寧腿的症狀。





# 藥物代謝改變， 導致用藥風險增加



- 透析病人**藥物清除力下降**，如止痛劑、鎮靜劑容易在體內累積。
- RLS的藥物治療（如多巴胺促進劑、苯二氮平類）對於透析病人而言，可能**產生過度鎮靜**、跌倒、或加劇焦慮等副作用，須謹慎使用。





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# \* 按摩





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洗腎中心

# \* 衛教資源

1

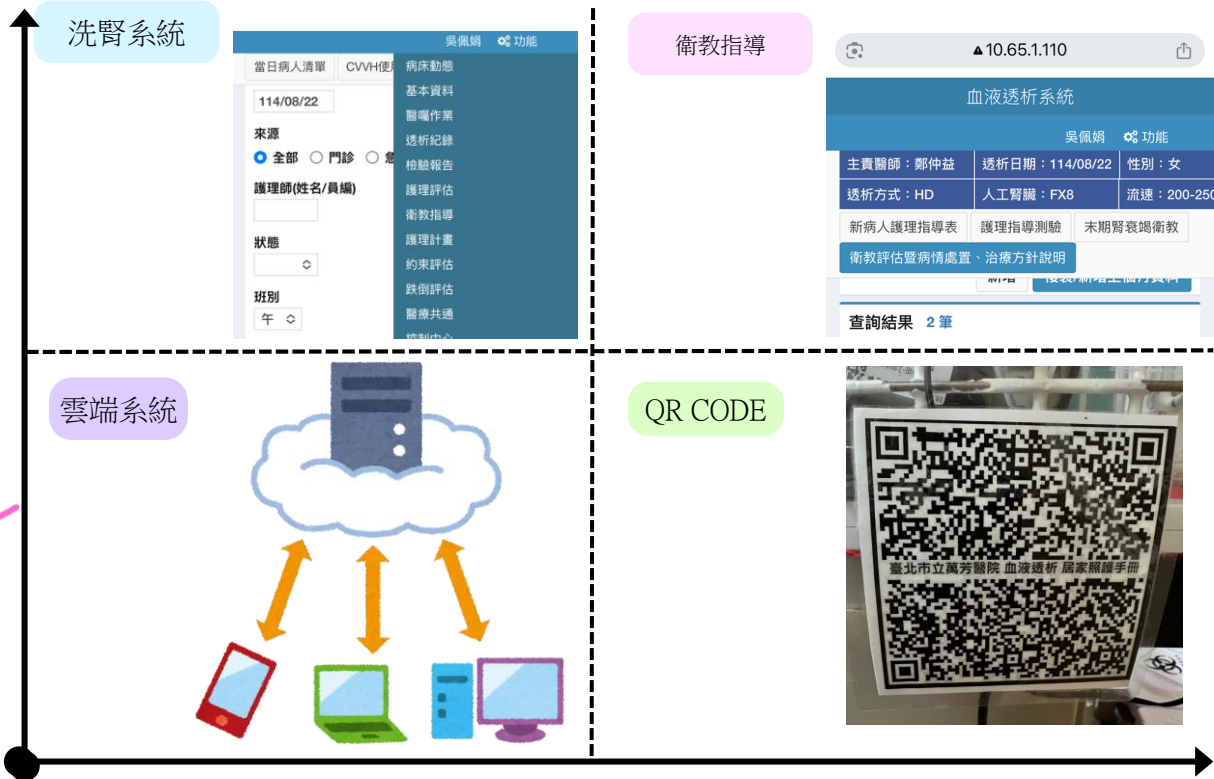
洗腎系統

衛教指導

2

雲端

QR code

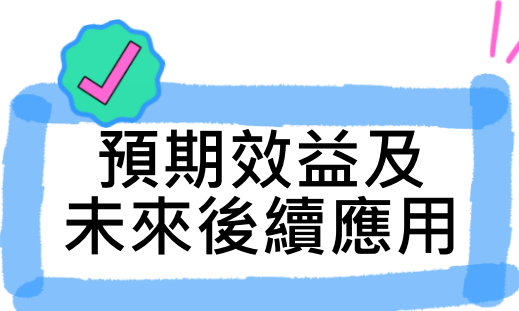




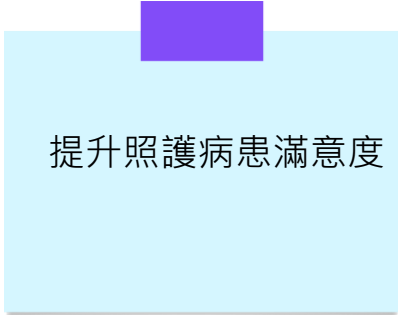
臺北市立萬芳醫院 - 委託臺北醫學大學辦理

Taipei Municipal Wanfang Hospital (Managed by Taipei Medical University)

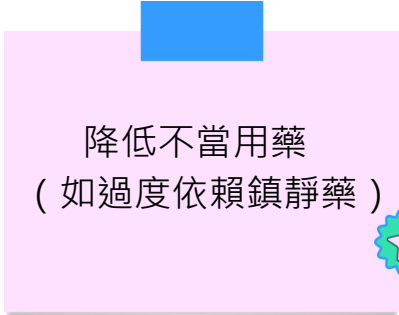
洗腎中心




## 預期效益及 未來後續應用



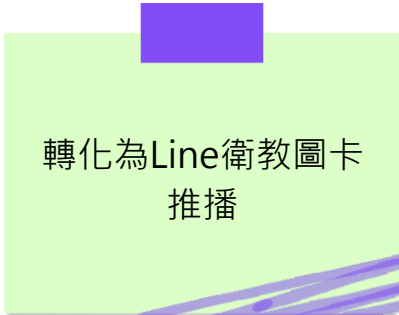
提升照護病患滿意度



降低不當用藥  
(如過度依賴鎮靜藥)



建立HD  
「RLS非藥物照護」  
照護指標



轉化為Line衛教圖卡  
推播

# 敬請指導





# 血液透析病人不寧腿症候群的按摩治療： 系統性統合分析

報告者: 呂翌榛<sup>1,2</sup>

吳巧琳<sup>12</sup>、田麗萍<sup>12</sup>、劉秋芬<sup>23</sup>、陳可欣<sup>245 6</sup>

- 1 臺北醫學大學附設萬芳醫院 血液透析室 護理師
- 2 臺北醫學大學附設萬芳醫院 護理臨床研究中心 護理師與研究員
- 3 臺北醫學大學附設萬芳醫院 血液透析室 護理長
- 4 臺北醫學大學 護理學院 護理學士後學程主任
- 5 Cochrane Taiwan 副主任與執行長，臺北醫學大學
- 6 臺北醫學大學附設萬芳醫院 實證知識轉譯中心主任



# 背景



末期腎臟病須要血液/腹膜透析或腎臟移植等治療方式



血液透析 雖然是必要的治療，但會引發併發症，例如不寧腿症候群（RLS），影響 30–50% 的病人，並顯著降低其生活品質（Ghasemi 等，2019）。



不寧腿症候群（RLS）特徵為無法控制地想移動雙腿，且在休息時會惡化。在血液透析病人中的盛行率為 19.4%–57.3%（Tsai 等，2019），遠高於一般族群的 7.12%（Song 等，2024）。



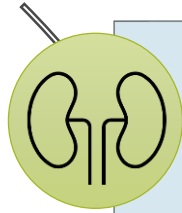
RLS 的治療方式：**藥物治療**：可能有副作用。

1. **非藥物治療**（例如芳香療法與反射按摩）：較安全且價格可負擔。這些治療可改善血液循環、減少肌肉痙攣並促進放鬆。

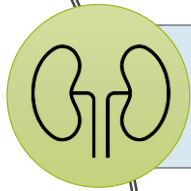


本統合分析評估按摩治療對減輕血液透析病人 RLS 症狀的效果。

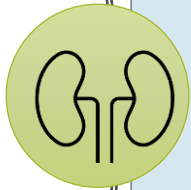
# 方法



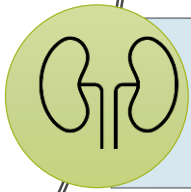
本系統性回顧與統合分析檢索了 Cochrane、PubMed、Embase 以及華藝線上圖書館 (Airiti Library)，檢索時間從資料庫建立至 2024 年 4 月 30 日。



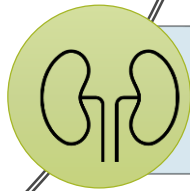
關鍵字: Hemodialysis, Restless leg syndrome, Reflexology, Massage.



納入的研究為以英文撰寫的隨機對照試驗 (RCT)，比較按摩與常規照護對減輕 RLS 症狀的效果。

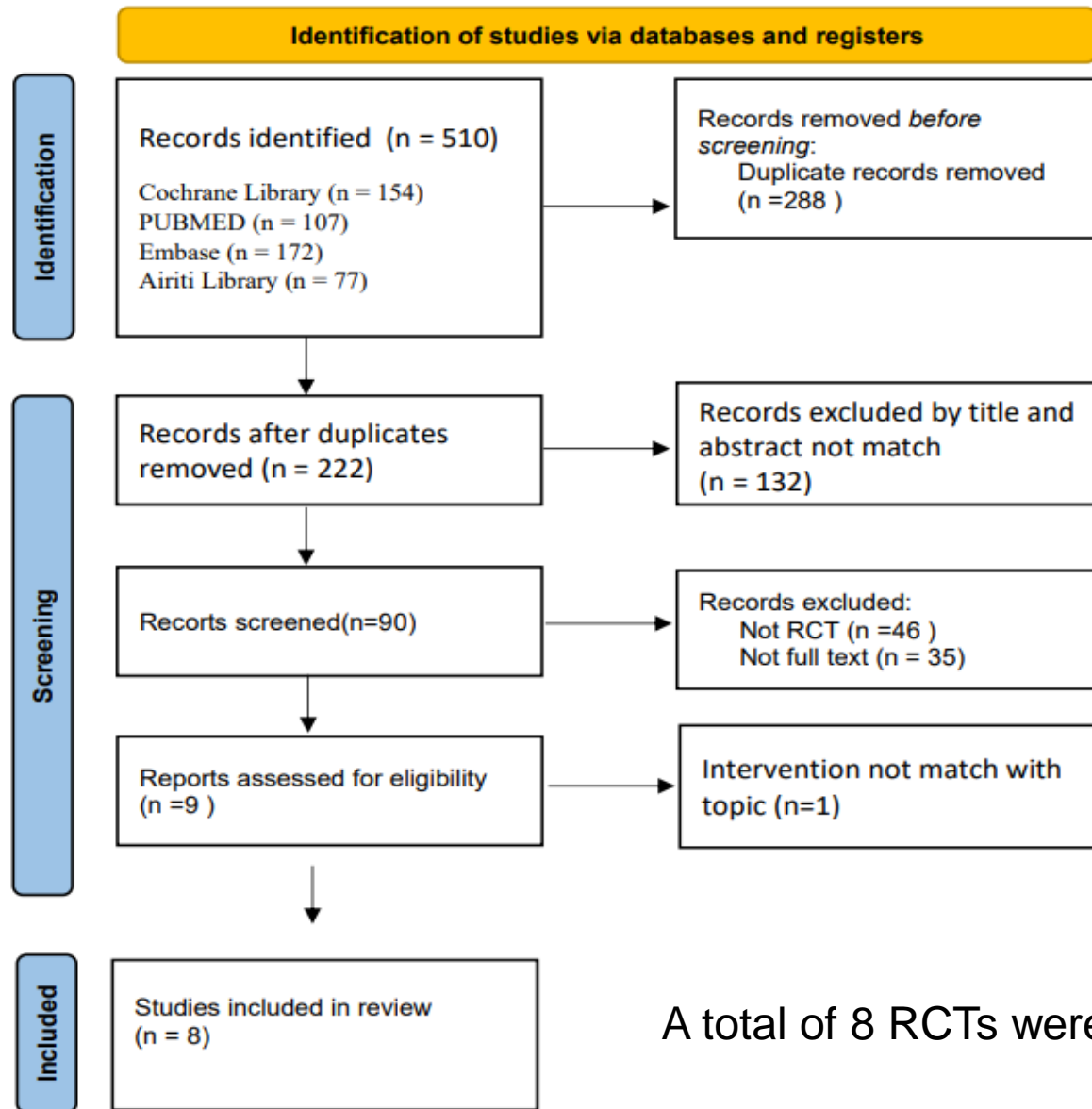


研究品質評估使用 Cochrane 偏倚風險評估工具 2.0 版 (適用於 RCT)。



統合分析使用 RevMan 5.4 軟體，採隨機效應模型進行分析。

# Results<sup>1</sup> Search Strategy and Screening Process



A total of 8 RCTs were included

# Results<sup>2</sup>

## Characteristics of included studies

TABLE 1 Characteristics of included studies (n = 8).

References	Population	Intervention	Control (UC)
Ajorpaz 2020	aged 18 to 65, with at least six months of HD	(A):Lavender oil massages, foot to knee, 45 mins, thrice weekly,4 weeks. by a trained nurse (n=29). (B):Glycerin oil massages based on the above approach. (n=31).	UC (n=30)
Amrollahi 2022	over three months of HD, with required ferritin and transferrin levels.	(A):Lavender oil massages, foot to knee, 30 mins, thrice weekly,4 weeks. by a trained nurse (n=20).	UC (n=21)
Hashemi 2015	aged 18 to 65, with at least six months of HD	(A):Lavender oil massages, foot to knee, 10 mins, thrice weekly,3 weeks. by a trained researcher (n=29).	UC (n=30)
Oshvandi 2021	aged 30 to 70, with at least a year of HD	(A):Lavender oil massages, foot to knee, 30 mins, thrice weekly,3 weeks. by a trained researcher (n=35). (B):orange oil massages based on the above approach. (n=35).	UC (n=35)
Nasiri 2019	aged 18 to 65, with at least six months of HD	(B):Olive oil massages, foot to knee, 10 mins, twice weekly 3 weeks. by a trained researcher (n=27)	UC (n=28)
Ghasemi 021	Female over 18 with at least six months of HD	(A):Lavender oil massages, foot to knee, 30 mins, thrice weekly,8 weeks. by a trained researcher (n=35) (R):Reflexology massages, on foot,30-mins,thrice weekly, by a trained researcher for 8 weeks. (n=35)	UC (n=35)
Ghanbari 2022	aged 18-65 underwent regular hemodialysis	(R):Reflexology massages, on foot,20-mins,thrice weekly, by a trained researcher for 4 weeks. (n=30)	UC (n=30)
Shahgholian 2016	aged 18 to 65, with at least three months of HD, not consuming medications to manage restless leg syndrome signs	(R):Reflexology massages, on foot,30-40mins,thrice weekl by a trained researcher for 4 weeks. (n=30)	UC (n=30)

UC: Usual care (A) massages by Lavender oil (B) massages by other oils (R):Reflexology massages

## 與今日Journal club之統合分析的比較

TABLE 4 | Subgroups analysis and meta-regression of studies.

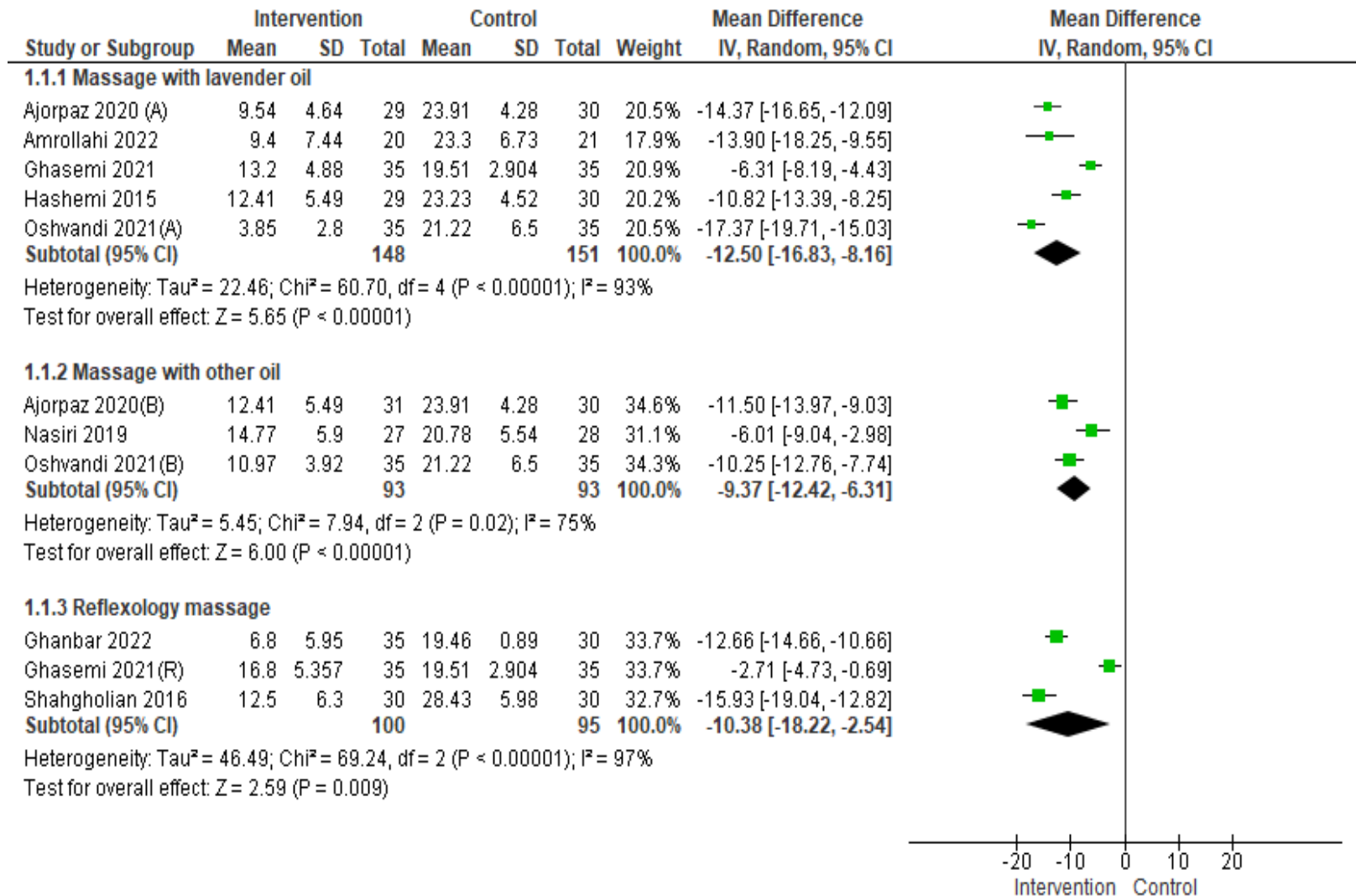
	Subgroups analysis							Meta-regression			
	Subgroups	Number of studies	Std. mean difference	Lower limit	Upper limit	Z value	p	Coefficient	Std. err.	t value	p
Intervention	Massage	8	-1.575	-2.637	-0.513	2.91	<b>0.004</b>	-0.365	0.529	-0.69	0.505
	Reflexology	2	-1.595	-4.315	1.124	1.15	0.250				
	Acupressure	2	-2.400	-2.874	-1.927	9.94	<b>0.000</b>				
HD treatment time	< 6 month	7	-1.317	-2.523	-0.110	2.14	<b>0.032</b>	-0.966	0.783	-1.23	0.246
	≥ 6 month	5	-2.265	-3.148	-1.383	5.03	<b>0.000</b>				
Duration of intervention	< 4 week	3	-2.208	-3.557	-0.859	3.21	<b>0.001</b>	0.662	0.933	0.71	0.494
	≥ 4 week	9	-1.553	-2.565	-0.540	3.01	<b>0.003</b>				
Session duration	< 15 min	4	-1.090	-2.709	0.530	1.32	0.187	-1.352	0.719	-1.88	0.090
	≥ 15 min	8	-2.036	-2.904	-1.169	4.60	<b>0.000</b>				
Massage oil	Using	8	-2.071	-2.840	-1.302	5.28	<b>0.000</b>	1.092	0.809	1.35	0.207
	Not using	4	-0.992	-2.882	0.898	1.03	0.304				

Note: Bold values are statistically significant values  $p < 0.005$ .

Abbreviation: HD = haemodialysis.

# Results<sup>4</sup>

A meta-analysis was performed utilizing random-effects models using RevMan 5.4.



# 與今日Journal club之統合分析的比較

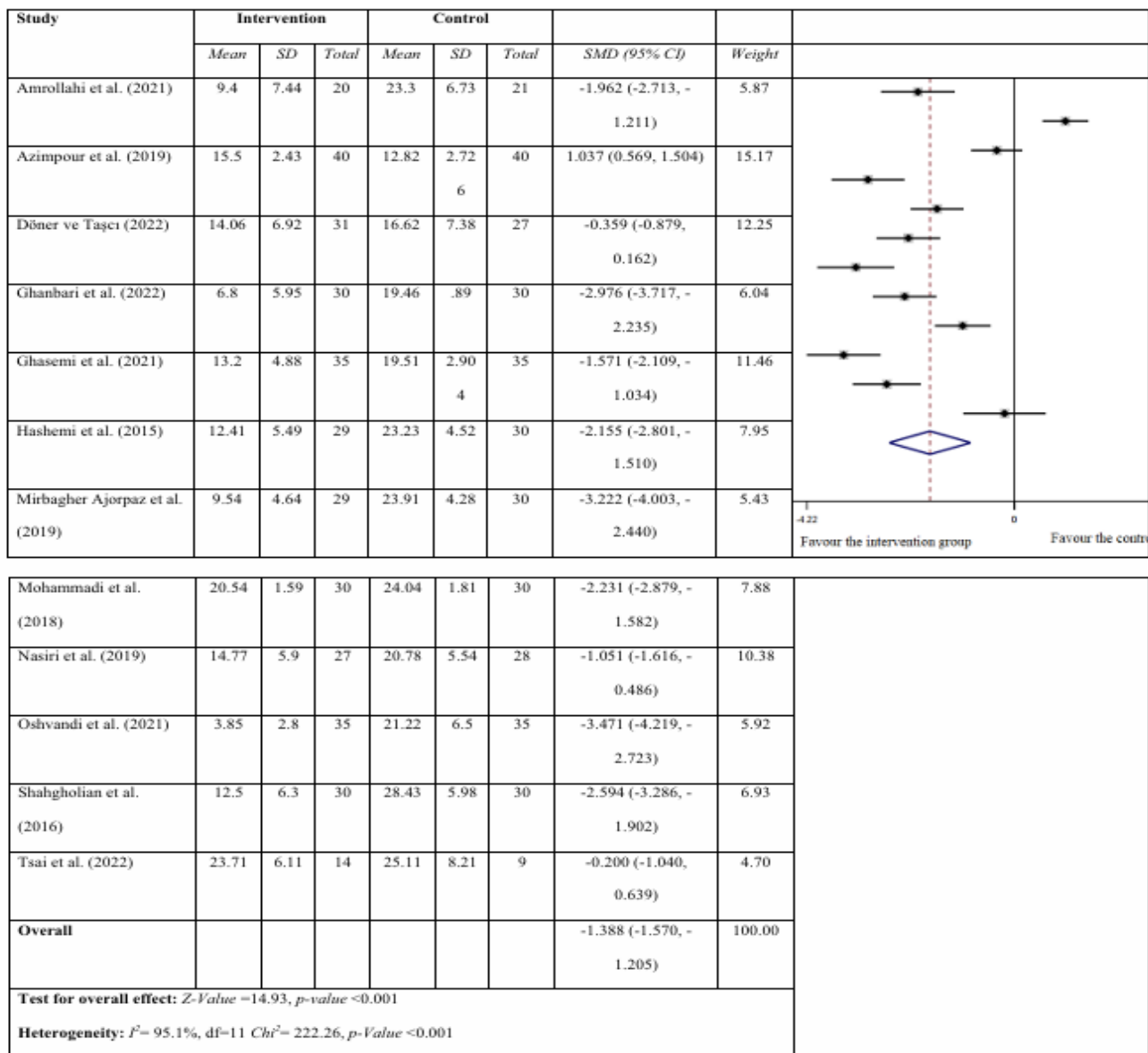


FIGURE 4 | Forest plot for the RLS severity of the intervention and the control group.

# 結論



本統合分析顯示，使用精油按摩或反射療法按摩，可能對減輕血液透析患者（HD）不寧腿症候群（RLS）症狀有效。



這些介入措施安全、具成本效益，並可納入日常照護中以提升病人照護成效。



本研究中主要的限制包括：追蹤時間較短、樣本數較小，以及病人狀況與反應的差異性。

# 今日Journal club之統合分析的結論

- 對血液透析患者來說，管理不寧腿症候群的症狀非常重要。研究顯示，按摩、穴位按壓與反射療法能有效減輕症狀，並由護理人員以全人照護方式提升患者的康復與生活品質。未來需要更多高品質研究，確認最佳的介入方式與長期效果。
- 綜合以上兩篇統合分析研究結果顯示，按摩、穴位按壓及反射療法等補充整合療法，能有效減輕血液透析患者不寧腿症候群的症狀，並提升生活品質，且安全、經濟、可納入日常照護。因此，我們可以進一步探討如何將這些實證轉化為淺顯易懂的衛教內容，製作病人衛教單張，協助患者在透析期間透過自我保健與簡單介入，改善症狀並提升生活品質。



*Yi-Chen Lu, R. N.*

[97135@w.tmu.edu.tw](mailto:97135@w.tmu.edu.tw)

# THANK YOU

- Amrollahi et al. (2022). Effects of aromatherapy massage on the severity of restless legs syndrome in hemodialysis patients: A randomized clinical trial. *Therapeutic Apheresis and Dialysis*, 26(5), 1131–1136.
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- Shahgholian et al. (2016). The effects of two methods of reflexology and stretching exercises on the severity of restless leg syndrome among hemodialysis patients. *Iranian Journal of Nursing and Midwifery Research*, 21(3), 219-224.

# 依系統性文獻回顧之結論



是否同意使用 按摩 改善透析病人不寧腿的症狀?



# 依系統性文獻回顧之結論

## 是否同意使用 按摩 改善透析病人不寧腿的症狀?



- 總人數：34 人
- 綠色牌子人數：26 人
- 黃色牌子人數：8 人