

Table S1 PRISMA 2020 Checklist

	Item	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	1
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	3
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	4
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	5
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	6
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	6
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	6
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	8
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	8
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	8
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	6-8
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked	9

Table S1 PRISMA 2020 Checklist

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		independently, and if applicable, details of automation tools used in the process.	
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	10
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	10
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	10
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	11
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	10
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	10
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	10
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	10
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	9
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	11
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	Figure 1
Study characteristics	17	Cite each included study and present its characteristics.	Table1 Table2
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	13

Table S1 PRISMA 2020 Checklist

	Item	Checklist item	Location where item is reported
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	13-18
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	13-18
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	13-18
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	13-18
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	Table S3
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	19
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	18-Table 3
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	20-22
	23b	Discuss any limitations of the evidence included in the review.	23
	23c	Discuss any limitations of the review processes used.	23
	23d	Discuss implications of the results for practice, policy, and future research.	24
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	6
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	6
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	-
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	27

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	Item	Checklist item	Location where item is reported
Competing interests	26	Declare any competing interests of review authors.	27
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	-

From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. **BMJ** 2021;372:n71. doi: 10.1136/bmj.n71

Table S2 The search strategies of electronic database

Database	Search strategies	Results to Jan, 2023
	<p>#6 #5 OR #4</p> <p>#7 (randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR placebo[tiab] OR drug therapy[sh] OR randomly[tiab] OR trial[tiab] OR groups[tiab]) NOT (animals[mh] NOT humans[mh])</p> <p>#8 #7 AND #6 AND #5</p>	
Embase	<p>#1 'acupressur':ab,ti,kw OR 'acupressure':ab,ti,kw OR 'bowen therapy':ab,ti,kw OR 'chih ya':ab,ti,kw OR 'chiropractic':ab,ti,kw OR 'chiropractic manipulative therapy':ab,ti,kw OR 'chuna':ab,ti,kw OR 'cmt':ab,ti,kw OR 'cranial-sacral therapy':ab,ti,kw OR 'cst':ab,ti,kw OR 'high velocity low amplitude thrust':ab,ti,kw OR 'hvla':ab,ti,kw OR 'instrument-assisted manipulation':ab,ti,kw OR 'manipulative therapy':ab,ti,kw OR 'manual treatment':ab,ti,kw OR 'massage':ab,ti,kw OR 'massage therapies':ab,ti,kw OR 'massage therapy':ab,ti,kw OR 'massotherapy':ab,ti,kw OR 'mobilisation':ab,ti,kw OR 'mobilization':ab,ti,kw OR 'mt':ab,ti,kw OR 'myofascial release':ab,ti,kw OR 'myotherapy':ab,ti,kw OR 'omt':ab,ti,kw OR 'osteopathic manipulation':ab,ti,kw OR 'osteopathic manipulative therapy':ab,ti,kw OR 'osteopathic manipulative treatment':ab,ti,kw OR 'osteopathic manipulative treatments':ab,ti,kw OR 'osteopathy':ab,ti,kw OR 'reflexology':ab,ti,kw OR 'remedial therapy':ab,ti,kw OR 'rolfing':ab,ti,kw OR 'shiatsu':ab,ti,kw OR 'shiatzu':ab,ti,kw OR 'smt':ab,ti,kw OR 'spinal adjustment':ab,ti,kw OR 'spinal manipulative therapy':ab,ti,kw OR 'spine adjustment':ab,ti,kw OR 'sterearthrolysis':ab,ti,kw OR 'therapies, zone':ab,ti,kw OR 'touch therapy':ab,ti,kw OR 'touching therapy':ab,ti,kw OR 'trigger point':ab,ti,kw OR 'tui na':ab,ti,kw OR 'tuina':ab,ti,kw OR 'visceral osteopathic manipulation':ab,ti,kw OR 'zhi ya':ab,ti,kw OR 'zone therapy':ab,ti,kw</p> <p>#2 'dysmenorrheas':ab,ti,kw OR 'menstrual pain':ab,ti,kw OR 'dysmenorrhea':ab,ti,kw OR 'primary dysmenorrhea':ab,ti,kw OR 'menstrual cramps':ab,ti,kw OR 'period pain':ab,ti,kw OR 'pelvic pain':ab,ti,kw OR 'painful period':ab,ti,kw OR 'menstrual disorder':ab,ti,kw OR 'uterine contraction':ab,ti,kw OR 'pd':ab,ti,kw OR 'menstrual pains':ab,ti,kw OR 'painful menstruation':ab,ti,kw OR 'painful menstruations':ab,ti,kw</p> <p>#3 'crossover procedure':de OR 'double-blind procedure':de OR 'randomized controlled trial':de OR 'single-blind procedure':de OR random*:de,ab,ti OR factorial*:de,ab,ti OR crossover*:de,ab,ti OR ((cross NEXT/1 over*):de,ab,ti) OR placebo*:de,ab,ti OR ((doubl* NEAR/1 blind*):de,ab,ti) OR ((singl* NEAR/1 blind*):de,ab,ti) OR assign*:de,ab,ti OR allocat*:de,ab,ti OR volunteer*:de,ab,ti</p> <p>#4 #1 AND #2 AND #3</p>	483
Web of Science	<p>TS=(acupressur OR acupressure OR bowen therapy OR chih ya OR chiropractic OR chiropractic manipulative therapy OR chuna OR cmt OR cranial-sacral therapy OR cst OR high velocity low amplitude thrust OR hvla OR instrument-assisted manipulation OR manipulative therapy OR manual treatment</p>	2920

Table S2 The search strategies of electronic database

Database	Search strategies	Results to Jan, 2023
	<p>OR massage OR massage therapies OR massage therapy OR massotherapy OR mobilisation OR mobilization OR mt OR myofascial release OR myotherapy OR omt OR osteopathic manipulation OR osteopathic manipulative therapy OR osteopathic manipulative treatment OR osteopathic manipulative treatments OR osteopathy OR reflexology OR remedial therapy OR rolfing OR shiatsu OR shiatzu OR smt OR spinal adjustment OR spinal manipulative therapy OR spine adjustment OR stereoarthrolysis OR therapies, zone OR touch therapy OR touching therapy OR trigger point OR tui na OR tuina OR visceral osteopathic manipulation OR zhi ya OR zone therapy) AND TS=(dysmenorrheas OR menstrual pain OR dysmenorrhea OR primary dysmenorrhea OR menstrual cramps OR period pain OR pelvic pain OR painful period OR menstrual disorder OR uterine contraction OR PD OR menstrual pains OR painful menstruation OR painful menstruations) AND TS=(randomized controlled trial OR quasi-randomized controlled trial OR controlled clinical trial OR randomized OR randomly OR Randomization OR RCT OR trial OR groups OR allocated OR blind procedure OR Crossover procedure OR Placebo OR Single blind OR Double blind OR blind)</p>	
CoChrane	<p>#1 ("dysmenrheas" OR "menstrual pain" OR "dysmenrhea" OR "primary dysmenrhea" OR "menstrual cramps" OR "period pain" OR "pelvic pain" OR "painful period" OR "menstrual disorder" OR "Uterine contraction" OR "PD" OR "Menstrual Pains" OR "Painful Menstruation" OR "Painful Menstruations"):ti,ab,kw</p> <p>#2 ("Acupressur" OR "acupressure" OR "Bowen therapy" OR "Chih Ya" OR "chiropractic" OR "Chiropractic Manipulative Therapy" OR "chuna" OR "CMT" OR "Cranial-Sacral Therapy" OR "CST" OR "high velocity low amplitude thrust" OR "HVLA" OR "Instrument-assisted manipulation" OR "manipulative therapy" OR "manipulative therapy" OR "manual treatment" OR "Massage" OR "Massage Therapies" OR "Massage Therapy" OR "Massotherapy" OR "mobilisation" OR "mobilization" OR "MT" OR "myofascial release" OR "myotherapy" OR "OMT" OR "Osteopathic Manipulation" OR "Osteopathic Manipulative Therapy" OR "Osteopathic Manipulative Treatment" OR "Osteopathic Manipulative Treatments" OR "osteopathy" OR "reflexology" OR "remedial therapy" OR "rolfing" OR "Shiatsu" OR "Shiatzu" OR "SMT" OR "Spinal Adjustment" OR "Spinal Manipulative Therapy" OR "Spine Adjustment" OR "stereoarthrolysis" OR "Therapies, Zone" OR "touch therapy" OR "touching therapy" OR "trigger point" OR "Tui Na" OR "tuina" OR "Visceral Osteopathic Manipulation" OR "Zhi Ya" OR "Zone Therapy"):ti,ab,kw</p> <p>#3 ("randomized controlled trial" OR "quasi-randomized controlled trial" OR "controlled clinical trial" OR "randomized" OR "randomly" OR "Randomization" OR "RCT" OR "trial" OR "groups" OR "allocated" OR "blind procedure" OR</p>	526

Table S2 The search strategies of electronic database

Database	Search strategies	Results to Jan, 2023
	<p>"Crossover procedure" OR "Placebo" OR "Single blind" OR "Double blind" OR "blind"):ti,ab,kw #1+#2+#3</p>	
<p>SNIOMED</p>	<p>1 "月经痛" [标题:智能] OR "痛经" [标题:智能] OR "经期疼痛" [标题:智能] OR "原发性痛经" [标题:智能] OR "月经痛" [摘要:智能] OR "痛经" [摘要:智能] OR "经期疼痛" [摘要:智能] OR "原发性痛经" [摘要:智能]</p> <p>2 (("推拿"[摘要:智能] OR "手法"[摘要:智能] OR "推拿治疗"[摘要:智能] OR "手法治疗"[摘要:智能] OR "按摩"[摘要:智能] OR "按摩治疗"[摘要:智能] OR "一指禅"[摘要:智能] OR "点穴"[摘要:智能] OR "膏摩"[摘要:智能] OR "按揉法"[摘要:智能] OR "掌振法"[摘要:智能] OR "指拨法"[摘要:智能] OR "正骨"[摘要:智能] OR "推扳法"[摘要:智能] OR "关节松解术"[摘要:智能] OR "关节松动术"[摘要:智能] OR "关节拉伸"[摘要:智能] OR "颅底椎技术"[摘要:智能] OR "高速低振幅"[摘要:智能] OR "整脊"[摘要:智能] OR "捏脊"[摘要:智能]) OR ("推拿"[标题:智能] OR "手法"[标题:智能] OR "推拿治疗"[标题:智能] OR "手法治疗"[标题:智能] OR "按摩"[标题:智能] OR "按摩治疗"[标题:智能] OR "一指禅"[标题:智能] OR "点穴"[标题:智能] OR "膏摩"[标题:智能] OR "按揉法"[标题:智能] OR "掌振法"[标题:智能] OR "指拨法"[标题:智能] OR "正骨"[标题:智能] OR "推扳法"[标题:智能] OR "关节松解术"[标题:智能] OR "关节松动术"[标题:智能] OR "关节拉伸"[标题:智能] OR "颅底椎技术"[标题:智能] OR "高速低振幅"[标题:智能] OR "整脊"[标题:智能] OR "捏脊"[标题:智能]))</p> <p>3 "对照"[标题:智能] OR "随机"[标题:智能] OR "半随机"[标题:智能] OR "试验组"[标题:智能] OR "实验组"[标题:智能] OR "干预组"[标题:智能] OR "分组"[标题:智能] OR "两组"[标题:智能] OR "三组"[标题:智能] OR "组间"[标题:智能] OR "观察"[标题:智能] OR "临床"[标题:智能] OR "例"[标题:智能] OR "对照"[摘要:智能] OR "随机"[摘要:智能] OR "半随机"[摘要:智能] OR "试验组"[摘要:智能] OR "实验组"[摘要:智能] OR "干预组"[摘要:智能] OR "分组"[摘要:智能] OR "两组"[摘要:智能] OR "三组"[摘要:智能] OR "组间"[摘要:智能] OR "观察"[摘要:智能] OR "临床"[摘要:智能] OR "例"[摘要:智能]</p> <p>(#3) AND (#2) AND (#1)</p>	<p>382</p>
<p>SNIOMED (Translated Version)</p>	<p>1 "Menstrual Pain" [Title: Smart] OR "Dysmenorrhea" [Title: Smart] OR "Menstrual Period Pain" [Title: Smart] OR "Primary Dysmenorrhea" [Title: Smart] OR "Menstrual Pain" [Abstract: Smart] OR "Dysmenorrhea" [Abstract: Smart] OR "Menstrual Period Pain" [Abstract: Smart] OR "Primary Dysmenorrhea" [Abstract: Smart]</p> <p>2 (("Massage" [Abstract: Smart] OR "Manipulation" [Abstract: Smart] OR "Massage Therapy" [Abstract: Smart] OR "Manipulative Therapy" [Abstract: Smart] OR "Rubbing" [Abstract: Smart] OR "Massage Treatment" [Abstract: Smart] OR "Finger Zen" [Abstract: Smart] OR "Acupoint" [Abstract: Smart] OR "Ointment Rubbing" [Abstract: Smart] OR "Rubbing Technique" [Abstract: Smart] OR "Palm Vibration Technique" [Abstract: Smart] OR "Finger Pressing</p>	<p>382</p>

Table S2 The search strategies of electronic database

Database	Search strategies	Results to Jan, 2023
	<p>Technique" [Abstract: Smart] OR "Orthopedics" [Abstract: Smart] OR "Push-Pull Technique" [Abstract: Smart] OR "Joint Loosening Procedure" [Abstract: Smart] OR "Joint Mobilization Procedure" [Abstract: Smart] OR "Joint Stretching" [Abstract: Smart] OR "Suboccipital Technique" [Abstract: Smart] OR "High-Speed Low-Amplitude" [Abstract: Smart] OR "Chiropractic Adjustment" [Abstract: Smart] OR "Spinal Pinching" [Abstract: Smart]) OR ("Massage" [Title: Smart] OR "Manipulation" [Title: Smart] OR "Massage Therapy" [Title: Smart] OR "Manipulative Therapy" [Title: Smart] OR "Rubbing" [Title: Smart] OR "Massage Treatment" [Title: Smart] OR "Finger Zen" [Title: Smart] OR "Acupoint" [Title: Smart] OR "Ointment Rubbing" [Title: Smart] OR "Rubbing Technique" [Title: Smart] OR "Palm Vibration Technique" [Title: Smart] OR "Finger Pressing Technique" [Title: Smart] OR "Orthopedics" [Title: Smart] OR "Push-Pull Technique" [Title: Smart] OR "Joint Loosening Procedure" [Title: Smart] OR "Joint Mobilization Procedure" [Title: Smart] OR "Joint Stretching" [Title: Smart] OR "Suboccipital Technique" [Title: Smart] OR "High-Speed Low-Amplitude" [Title: Smart] OR "Chiropractic Adjustment" [Title: Smart] OR "Spinal Pinching" [Title: Smart]))</p> <p>3 "Control" [Title: Smart] OR "Random" [Title: Smart] OR "Semi-Random" [Title: Smart] OR "Experimental Group" [Title: Smart] OR "Intervention Group" [Title: Smart] OR "Treatment Group" [Title: Smart] OR "Grouping" [Title: Smart] OR "Two Groups" [Title: Smart] OR "Three Groups" [Title: Smart] OR "Inter-group" [Title: Smart] OR "Observation" [Title: Smart] OR "Clinical" [Title: Smart] OR "Case" [Title: Smart] OR "Control" [Abstract: Smart] OR "Random" [Abstract: Smart] OR "Semi-Random" [Abstract: Smart] OR "Experimental Group" [Abstract: Smart] OR "Intervention Group" [Abstract: Smart] OR "Treatment Group" [Abstract: Smart] OR "Grouping" [Abstract: Smart] OR "Two Groups" [Abstract: Smart] OR "Three Groups" [Abstract: Smart] OR "Inter-group" [Abstract: Smart] OR "Observation" [Abstract: Smart] OR "Clinical" [Abstract: Smart] OR "Case" [Abstract: Smart]</p> <p>(#3) AND (#2) AND (#1)</p>	
WanFang	<p>(主题:(“痛经” or “月经痛” or “原发性痛经” or “经期疼痛”) AND 主题:(“对照” or “随机” or “半随机” or “实验组” or “干预组” or “实验组” or “实验组” or “分组” or “两组” or “组间” or “观察” or “临床” or “例”) AND 主题:(“推拿” or “手法” or “按摩” or “一指禅” or “点穴” or “膏摩” or “按揉法” or “掌振法” or “指拨法” or “正骨” or “推扳法” or “关节松解术” or “关节松动术” or “关节拉伸” or “颅底椎技术” or “高速低振幅” or “整脊” or “捏脊” or “手法治疗”)) OR (题名或关键词:(“痛经” or “月经痛” or “原发性痛经” or “经期疼痛”) AND 题名或关键词:(“对照” or “随机” or “半随机” or “实验组” or “干预组” or “实验组” or “实验组” or “分组” or “两组” or “组间” or “观察” or “临床” or “例”) AND 题名或关键词:(“推拿” or “手法” or “按摩” or “一指禅” or “点穴” or “膏摩” or “按揉法”</p>	588

Table S2 The search strategies of electronic database

Database	Search strategies	Results to Jan, 2023
	or "掌振法" or "指拨法" or "正骨" or "推扳法" or "关节松解术" or "关节松动术" or "关节拉伸" or "颅底椎技术" or "高速低振幅" or "整脊" or "捏脊" or "手法治疗"))	
WanFang (Translated Version)	(Topic:(<i>"Dysmenorrhea"</i> or <i>"Menstrual Pain"</i> or <i>"Primary Dysmenorrhea"</i> or <i>"Menstrual Period Pain"</i>) AND Topic:(<i>"Control"</i> or <i>"Random"</i> or <i>"Semi-Random"</i> or <i>"Experimental Group"</i> or <i>"Intervention Group"</i> or <i>"Treatment Group"</i> or <i>"Grouping"</i> or <i>"Two Groups"</i> or <i>"Inter-group"</i> or <i>"Observation"</i> or <i>"Clinical"</i> or <i>"Case"</i>) AND Topic:(<i>"Massage"</i> or <i>"Manipulation"</i> or <i>"Rubbing"</i> or <i>"Finger Zen"</i> or <i>"Acupoint"</i> or <i>"Ointment Rubbing"</i> or <i>"Rubbing Technique"</i> or <i>"Palm Vibration Technique"</i> or <i>"Finger Pressing Technique"</i> or <i>"Orthopedics"</i> or <i>"Push-Pull Technique"</i> or <i>"Joint Loosening Procedure"</i> or <i>"Joint Mobilization Procedure"</i> or <i>"Joint Stretching"</i> or <i>"Suboccipital Technique"</i> or <i>"High-Speed Low-Amplitude"</i> or <i>"Chiropractic Adjustment"</i> or <i>"Spinal Pinching"</i> or <i>"Massage Therapy"</i>)) OR (Title or Keywords:(<i>"Dysmenorrhea"</i> or <i>"Menstrual Pain"</i> or <i>"Primary Dysmenorrhea"</i> or <i>"Menstrual Period Pain"</i>) AND Title or Keywords:(<i>"Control"</i> or <i>"Random"</i> or <i>"Semi-Random"</i> or <i>"Experimental Group"</i> or <i>"Intervention Group"</i> or <i>"Treatment Group"</i> or <i>"Grouping"</i> or <i>"Two Groups"</i> or <i>"Inter-group"</i> or <i>"Observation"</i> or <i>"Clinical"</i> or <i>"Case"</i>) AND Title or Keywords:(<i>"Massage"</i> or <i>"Manipulation"</i> or <i>"Rubbing"</i> or <i>"Finger Zen"</i> or <i>"Acupoint"</i> or <i>"Ointment Rubbing"</i> or <i>"Rubbing Technique"</i> or <i>"Palm Vibration Technique"</i> or <i>"Finger Pressing Technique"</i> or <i>"Orthopedics"</i> or <i>"Push-Pull Technique"</i> or <i>"Joint Loosening Procedure"</i> or <i>"Joint Mobilization Procedure"</i> or <i>"Joint Stretching"</i> or <i>"Suboccipital Technique"</i> or <i>"High-Speed Low-Amplitude"</i> or <i>"Chiropractic Adjustment"</i> or <i>"Spinal Pinching"</i> or <i>"Massage Therapy"</i>))	588
CNKI	SU=(<i>'推拿'</i> + <i>'手法'</i> + <i>'按摩'</i> + <i>'一指禅'</i> + <i>'点穴'</i> + <i>'膏摩'</i> + <i>'按揉法'</i> + <i>'掌振法'</i> + <i>'指拨法'</i> + <i>'正骨'</i> + <i>'推扳法'</i> + <i>'关节松解术'</i> + <i>'关节松动术'</i> + <i>'关节拉伸'</i> + <i>'颅底椎技术'</i> + <i>'高速低振幅'</i> + <i>'推拿治疗'</i> + <i>'整脊'</i> + <i>'捏脊'</i> + <i>'手法治疗'</i> + <i>'按摩治疗'</i>) OR TKA=(<i>'推拿'</i> + <i>'手法'</i> + <i>'按摩'</i> + <i>'一指禅'</i> + <i>'点穴'</i> + <i>'膏摩'</i> + <i>'按揉法'</i> + <i>'掌振法'</i> + <i>'指拨法'</i> + <i>'正骨'</i> + <i>'推扳法'</i> + <i>'关节松解术'</i> + <i>'关节松动术'</i> + <i>'关节拉伸'</i> + <i>'颅底椎技术'</i> + <i>'高速低振幅'</i> + <i>'推拿治疗'</i> + <i>'整脊'</i> + <i>'捏脊'</i> + <i>'手法治疗'</i> + <i>'按摩治疗'</i>) AND SU=(<i>'痛经'</i> + <i>'月经痛'</i> + <i>'经期疼痛'</i> + <i>'原发性痛经'</i>) AND SU=(<i>'对照'</i> + <i>'随机'</i> + <i>'半随机'</i> + <i>'实验组'</i> + <i>'试验组'</i> + <i>'干预组'</i> + <i>'分组'</i> + <i>'两组'</i> + <i>'三组'</i> + <i>'组间'</i> + <i>'观察'</i> + <i>'临床'</i> + <i>'例'</i>)	432
CNKI (Translated Version)	SU = (<i>'Massage'</i> + <i>'Manipulation'</i> + <i>'Rubbing'</i> + <i>'Finger Zen'</i> + <i>'Acupoint'</i> + <i>'Ointment Rubbing'</i> + <i>'Rubbing Technique'</i> + <i>'Palm Vibration Technique'</i> + <i>'Finger Pressing Technique'</i> + <i>'Orthopedics'</i> + <i>'Push-Pull Technique'</i> + <i>'Joint Loosening Procedure'</i> + <i>'Joint Mobilization Procedure'</i> + <i>'Joint Stretching'</i> + <i>'Suboccipital Technique'</i> + <i>'High-Speed Low-Amplitude'</i> + <i>'Massage Therapy'</i> + <i>'Chiropractic Adjustment'</i> + <i>'Spinal Pinching'</i> + <i>'Manipulative Therapy'</i> + <i>'Massage Treatment'</i>) OR TKA = (<i>'Massage'</i> + <i>'Manipulation'</i> + <i>'Rubbing'</i> + <i>'Finger Zen'</i> + <i>'Acupoint'</i> + <i>'Ointment Rubbing'</i> + <i>'Rubbing Technique'</i> + <i>'Palm Vibration Technique'</i> + <i>'Finger</i>	432

Table S2 The search strategies of electronic database

Database	Search strategies	Results to Jan, 2023
	Pressing Technique' + 'Orthopedics' + 'Push-Pull Technique' + 'Joint Loosening Procedure' + 'Joint Mobilization Procedure' + 'Joint Stretching' + 'Suboccipital Technique' + 'High-Speed Low-Amplitude' + 'Massage Therapy' + 'Chiropractic Adjustment' + 'Spinal Pinching' + 'Manipulative Therapy' + 'Massage Treatment') AND SU = ('Dysmenorrhea' + 'Menstrual Pain' + 'Menstrual Period Pain' + 'Primary Dysmenorrhea') AND SU = ('Control' + 'Random' + 'Semi-Random' + 'Experimental Group' + 'Test Group' + 'Intervention Group' + 'Grouping' + 'Two Groups' + 'Three Groups' + 'Inter-group' + 'Observation' + 'Clinical' + 'Case')	
VIP	M=(推拿 OR 手法 OR 按摩 OR 一指禅 OR 点穴 OR 膏摩 OR 按揉法 OR 掌振法 OR 指拨法 OR 正骨 OR 推扳法 OR 关节松解术 OR 关节松动术 OR 关节拉伸 OR 颅底椎技术 OR 高速低振幅 OR 推拿治疗 OR 整脊 OR 捏脊 OR 手法治疗 OR 按摩治疗)AND M=(痛经 OR 月经痛 OR 经期疼痛 OR 原发性痛经)AND M=(对照 OR 随机 OR 半随机 OR 实验组 OR 试验组 OR 干预组 OR 分组 OR 两组 OR 三组 OR 组间 OR 观察 OR 临床 OR 例)	226
VIP (Translated Version)	M = (Massage OR Manipulation OR Rubbing OR Finger Zen OR Acupoint OR Ointment Rubbing OR Rubbing Technique OR Palm Vibration Technique OR Finger Pressing Technique OR Orthopedics OR Push-Pull Technique OR Joint Loosening Procedure OR Joint Mobilization Procedure OR Joint Stretching OR Suboccipital Technique OR High-Speed Low-Amplitude OR Massage Therapy OR Chiropractic Adjustment OR Spinal Pinching OR Manipulative Therapy OR Massage Treatment) AND M = (Dysmenorrhea OR Menstrual Pain OR Menstrual Period Pain OR Primary Dysmenorrhea) AND M = (Control OR Random OR Semi-Random OR Experimental Group OR Test Group OR Intervention Group OR Grouping OR Two Groups OR Three Groups OR Inter-group OR Observation OR Clinical OR Case)	226

Table S3 Summary table of Sensitive analyses

Inclusion factors	Manual therapy versus no treatment				Manual therapy versus NSAIDs			
	Pain intensity (MD, 95%CI, numbers trials)		MDQ (MD, 95%CI, numbers trials)		Pain intensity (MD, 95%CI, numbers of trials)		Effective rate (RR, 95%CI, numbers trials)	
	sensitive analysis	total meta analysis	sensitive analysis	total meta analysis	sensitive analysis	total meta analysis	sensitive analysis	total meta analysis
Sample size \geq 30	0.70 [0.19, 1.20] 6	0.81 [0.35, 1.28] 8	3.67 [2.02, 5.31] 3	3.84 [2.27, 5.40] 4	1.65 [0.47, 2.84] 5	3.01 [1.08, 4.94] 9	4.77 [3.17, 7.17] 9	4.87 [3.29, 7.20] 11
Explicit randomization procedure of contact information	0.59 [0.06, 1.12] 5	0.81 [0.35, 1.28] 8	3.47 [1.05, 5.89] 1	3.84 [2.27, 5.40] 4	3.26 [0.74, 5.79] 6	3.01 [1.08, 4.94] 9	7.91 [3.84, 16.30] 5	4.87 [3.29, 7.20] 11