Supplement 1. Characteristics of included studies

Author (Year)	Country	Study Design	Data Collection Method/Tool	Participants		
				Disciplines(s)	Sample size	Characteristics
PUBLISHED STUDIES						
Alcantara et al. (2015) [29]	USA	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE)	Chiropractic	n=162; RR=32.4%	**Gender**: 63% female **Age**: 75% aged 20-39 years **Holds a post-graduate degree**: 51%
Alvarez et al. (2021) [30]	Spain	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE; Spanish translation)	Osteopathy	n=567; RR=9%	**Gender**: 27% female **Age**: 63% aged 30-49 years **Holds a post-graduate degree**: 46%
Braun et al. (2013) [31]	Australia	Cross-sectional survey	Questionnaire developed in consultation with National Herbalists Association of Australia, and an advisory group	Naturopathy; Western Herbal Medicine	n=479; RR=NR	**Gender**: 84% female **Age**: NR **Holds a post-graduate degree**: 20%
Bussieres et al. (2015) [18]	Canada	Cross-sectional study	Evidence-Based practice Attitude and utilization SurvEy (EBASE; English version & French translation)	Chiropractic	n=554; RR=8%	**Gender**: 33% female **Age** (mean & SD): 42.1 ± 11.4 years **Holds a post-graduate degree**: 11%
Canaway et al. (2018) [32]	Australia	Qualitative	Round table discussion	Multiple CM modalities (plus medicine, nursing & pharmacy)	n=22; RR=NA	**Gender**: 47% female **Age**: 40% aged 40-55 years **Holds a post-graduate degree**: NR
Cerritelli et al. (2021) [19]	Italy	Cross-sectional study	Evidence-Based practice Attitude and utilization SurvEy (EBASE; Italian translation)	Osteopathy	n=473; RR=95%	**Gender**: 42% female **Age**: 55% aged 30-49 years **Holds a post-graduate degree**: 5%
Goldenberg et al. (2017) [33]	USA	Qualitative	Semi-structured interviews	Naturopathy	n=17; RR=NR	**Gender**: NR **Age**: NR **Holds a post-graduate degree**: NR
Gowan-Moody et al. (2013) [34]	Canada	Cross-sectional survey	Questionnaire developed using items from Suter et al. (2007) and Estabrooks et al. (2004)	Massage therapy	n=333; RR=40.9%	**Gender**: 87% female **Age**: 68% aged ≤40 years **Holds a post-graduate degree**: 0.3%

Hadley et al. (2008) [35]	United Kingdom	Cross-sectional survey	Questionnaire developed by authors	CM & Allied Health practitioners	n=65; RR=NR	**Gender**: NR **Age**: NR **Holds a post-graduate degree**: NR
Hu et al. (2004) [37]	China	Cross-sectional survey	Questionnaire developed by authors	Traditional Chinese medicine	n=123; RR=93.9%	**Gender**: 47% female **Age**: 56.1% aged 31-40 years **Holds a post-graduate degree**: 57%
Kim & Cho (2014) [20]	Republic of Korea	Cross-sectional survey	Questionnaire adapted from McColl et al. (2009)	Traditional Korean Medicine	n=265; RR=68.3%	**Gender**: 49% female **Age**: 84% aged 25-30 years **Holds a post-graduate degree**: NR
Lawrence et al. (2008) [36]	USA	Qualitative	Focus group	Chiropractic	n=8; RR=80%	**Gender**: NR **Age**: NR **Holds a post-graduate degree**: NR
Leach (2022) [42]	New Zealand	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE)	Naturopaths	n=104; RR=17.4%	**Gender**: 86% female **Age**: 55% aged 40-59 years **Holds a post-graduate degree**: 66%
Leach & Gillham (2011) [38]	Australia	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE)	Naturopathy; Homeopathy; Western herbal medicine; Traditional Chinese medicine	n=126; RR=36%	**Gender**: 70% female **Age**: 60% aged 40-59 years **Holds a post-graduate degree**: 70%
Leach et al (2018) [39]	Australia	Qualitative	Roundtable discussions	Multiple CM modalities (plus medicine, nursing & pharmacy)	n=17; RR=NA	**Gender**: 47% female **Age**: 40% aged 40-55 years **Holds a post-graduate degree**: NR
Leach et al. (2019) [21]	Australia	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE)	Osteopathy	n=332; RR=NR	**Gender**: 52% female **Age**: 55% aged 30-49 years **Holds a post-graduate degree**: 60%
Leach et al. (2020) [40]	Sweden	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE; Swedish translation)	Osteopathy	n=78; RR=31%	**Gender**: 49% female **Age**: 62% aged 30-49 years **Holds a post-graduate degree**: 26%
Leach et al. (2021) [41]	Sweden	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE; Swedish translation)	Chiropractic	n=56; RR=33%	**Gender**: 39% female **Age**: 59% aged 30-49 years **Holds a post-graduate degree**: 71%

Roecker et al. (2013) [43]	USA	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE)	Chiropractic	n=144; RR=48%	**Gender**: 9% female **Age**: 72% aged 50-69 years **Holds a post-graduate degree**: NR
Schneider et al. (2015) [44]	USA	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE)	Chiropractic	n=1,314; RR=NR	**Gender**: 25% female **Age** (mean & SD): 46.7 ± 11.6 years **Holds a post-graduate degree**: 36%
Snow (2017) [45]	USA	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE)	Western herbal medicine	n=74; RR=35.1%	**Gender**: 57% female **Age**: 54% aged 50-69 years **Holds a post-graduate degree**: 68%
Spence & Li (2013) [46]	Scotland	Qualitative	Semi-structured interviews	Traditional Chinese medicine	n=12; RR=80%	**Gender**: 17% female **Age**: NR **Holds a post-graduate degree**: NR
Stomski et al. (2008) [47]	Australia	Cross-sectional survey	Questionnaire adapted from Metcalfe et al. (2001)	Acupuncture	n=72; RR=76.6%	**Gender**: NR **Age**: NR **Holds a post-graduate degree**: 28%
Stuttard (2002) [48]	United Kingdom	Mixed method	Focus groups (which informed the survey items), and postal questionnaire	Massage therapy	n=172; RR=23%	**Gender**: NR **Age**: NR **Holds a post-graduate degree**: NR
Sullivan et al. (2017) [49]	USA	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE)	Yoga	n=367; RR=20%	**Gender**: 91% female **Age**: 62% aged 40-59 years **Holds a post-graduate degree**: 59%
Sundberg et al. (2018) [50]	United Kingdom	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE)	Osteopathy	n=517; RR=9.9%	**Gender**: 39% female **Age**: 47% aged 40-59 years **Holds a post-graduate degree**: 54%
Suter et al. (2007) [51]	Canada	Cross-sectional survey	Customised questionnaire	Chiropractic & Massage	n=483; RR=32.6%	**Gender**: 87% female (massage therapists) and 22% female (chiropractors) **Age**: 45% aged 31-40 years **Holds a post-graduate degree**: NR

Veziari et al. (2021) [52]	Australia & New Zealand	Cross-sectional survey	BarrierS To the Application and Conduct of rESearch (oBSTACLES) instrument	Acupuncture, Aromatherapy, Ayurveda, Bowen Therapy, Chiropractic, Clinical nutrition, Feldenkrais, Homeopathy, Kinesiology, Massage therapy, Mind body medicine, Myotherapy, Naturopathy, Osteopathy, Reflexology, Traditional Chinese medicine, Western Herbal medicine, Yoga	n=682; RR=NR	**Gender**: 68% female **Age**: 60% aged 40-59 years **Holds a post-graduate degree**: 45%
Walker (2014) [53]	Australia	Survey	Jette questionnaire	Chiropractic	n=584; RR=13.3%	**Gender**: 26% female **Age**: 55% aged 31-50 years **Holds a post-graduate degree**: NR
Weber & Rajendran (2018) [54]	United Kingdom	Survey	JQ37 Questionnaire	Osteopathy	n=370; RR=18.4%	**Gender**: 49% female **Age**: 61% aged 31-50 years **Holds a post-graduate degree**: 13%
Wong et al. (2021) [55]	China	Qualitative	Interviews	Traditional Chinese medicine	n=25; RR=100%	**Gender**: 48% female **Age**: range 24-41 years **Holds a post-graduate degree**: 76%
Woo & Cho (2012) [56]	Republic of Korea	Qualitative	Semi-structured interviews	Traditional Korean Medicine	n=17; RR=26%	**Gender**: NR **Age**: NR **Holds a post-graduate degree**: NR
UNPUBLISHED STUDIES						
Leach et al. (2022a) [57]	Sweden	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE; Swedish translation)	Naprapathy	n=137; RR=14.4%	**Gender**: 45% female **Age**: 63% aged 30-49 years **Holds a post-graduate degree**: 9%
Leach et al. (2022b) [58]	Australia	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE)	Naturopaths	n=174; RR=NR	**Gender**: 87% female **Age**: 63% aged 40-59 years **Holds a post-graduate degree**: 28%

Leach et al. (2022c) [59]	Australia	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE)	Manual CM therapies (i.e., Bowen therapy, massage therapy, myotherapy, reflexology)	n=294; RR=NR	**Gender**: 77% female **Age**: 60% aged 50-69 years **Holds a post-graduate degree**: 14%
Leach et al. (2022d) [60]	Australia	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE)	CM Therapies (i.e., acupuncture, aromatherapy, Ayurveda, TCM, homeopathy, kinesiology, clinical nutrition, Western herbal medicine, yoga)	n=203; RR=NR	**Gender**: 78% female **Age**: 65% aged 40-59 years **Holds a post-graduate degree**: 31%
Leach et al. (2022e) [61]	Canada	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE)	Naturopathy	n=234; RR=NR	**Gender**: 71% female **Age**: 70% aged 30-49 years **Holds a post-graduate degree**: 64%
Myhrvold et al. (2022) [62]	Norway	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE; Norwegian translation)	Chiropractic	n=312; RR=41%	**Gender**: 43% female **Age**: 70% aged 30-49 years **Holds a post-graduate degree**: 65%
Pelletier et al. (2022) [63]	Canada	Cross-sectional survey	Evidence-Based practice Attitude and utilization SurvEy (EBASE; English version and French translation)	Osteopathy	n=416; RR=NR	**Gender**: 61% female **Age**: 52% aged 30-49 years **Holds a post-graduate degree**: 37%

CM – Complementary medicine; NA – Not applicable; NR – Not reported; RR – Response rate

Supplement 2. Summary of findings: enablers and barriers to evidence implementation in complementary medicine

Author (Year)	Barriers to evidence implementation	Enablers of Evidence Implementation
PUBLISHED STUDIES		
Alcantara et al. (2015) [29]	**Attitudinal:** - *Utility*: Lack of interest in EBP; Lack of relevance to CM practice Structural: - *Availability*: Lack of time; Lack of clinical evidence in CM - *Accessibility*: Lack of resources (i.e.: computer, Internet, online databases) **Cognitive:** - *Acquisition*: Limited EBP education (training only being a minor component of a course); Lack of skills in conducting clinical trials and systematic reviews; Insufficient skills in locating, interpreting, and appraising research; Insufficient skills in applying research findings to clinical practice **Cultural:** - *Propulsion*: Lack of incentive to participate in EBP - *Preference*: Lack of colleague support for EBP; Lack of industry support for EBP; Patient treatment preference	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in chiropractic practice - *Utility*: Belief that Journals/textbooks/research findings are useful for day to day practice, EBP assists with clinical decision-making, and EBP improves patient care **Structural:** - *Accessibility*: Access to the Internet in the workplace, free online databases, online databases that require license fees, and full-text journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to the field, critically appraised topics relevant to the field, and tools that facilitate critical appraisal **Cognitive:** - *Acquisition*: Access to online education materials related to EBP; desire to improve EBP skills
Alvarez et al. (2021) [30]	**Structural:** - *Availability*: Lack of time; lack of clinical evidence in osteopathy **Cognitive:** - *Acquisition*: Insufficient skills in locating research, interpreting research, appraising research, and applying research findings to practice **Cultural** - *Propulsion*: Lack of incentive to participate in EBP - *Preference*: Lack of industry support for EBP	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in osteopathic practice - *Utility*: Belief that journals/textbooks/research findings are useful for day to day practice **Structural:** - *Accessibility*: Access to the Internet in the workplace, free online databases, online databases that require license fees, and full-text journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to the field, critically appraised topics related to osteopathy, tools that facilitate critical appraisal, and tools for rating research **Cognitive:** - *Acquisition*: Access to online education materials related to EBP; desire to improve EBP skills
Braun et al. (2013) [31]	Barriers not reported	**Structural:** - *Accessibility*: Easy access to information on the desktop; free access to information; frequent updates on new information

		- *Appropriateness*: Information not produced by manufacturers **Cultural:** - *Philosophy*: Information containing traditional and scientific evidence
Bussieres et al. (2015) [18]	**Structural:** - *Acquisition*: Limited training in EBP, critical thinking/analysis, clinical research and systematic reviews in chiropractic education - *Availability*: Lack of time; lack of clinical evidence in CM **Cognitive:** - *Acquisition*: Insufficient skills in critically appraising research, and interpreting research **Cultural:** - *Propulsion*: Lack of incentive to participate in EBP - *Preference*: Lack of industry support for EBP	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in chiropractic practice; belief that EBP is fundamental to the advancement of the profession - *Utility*: Belief that journals/textbooks/research findings are useful for day to day practice, EBP assists in clinical decision-making, and EBP improves patient care **Structural:** - *Accessibility*: Access to the Internet in the workplace, and free online databases - *Appropriateness*: Provision of critical reviews of research evidence relevant to the field **Cognitive:** - *Acquisition*: Access to online education materials related to EBP; desire to improve EBP skills
Canaway et al. (2018) [32]	**Cognitive:** - *Appreciation*: Lack of awareness and understanding of available research evidence among CM clinicians - *Application*: Lack of engagement with available research evidence among CM clinicians **Cultural:** - *Philosophy*: Different epistemologies and ideologies underpinning each system of medicine; CM systems of knowledge are embedded within philosophies and cultures often divergent to those associated with many of the institutions of power; - *Propulsion*: Lack of leadership within CM - *Preference*: Lack of support for CM research within education institutions	**Structural:** - *Availability*: Support researchers in generating CM evidence and innovation **Cognitive:** - *Application*: Facilitate research engagement through evidence-translation, education and communication - *Appreciation*: Promote EBP as a framework that integrates the best available clinical evidence with clinical expertise and patient's beliefs, needs and circumstance **Cultural:** - *Propulsion*: Generate champions to facilitate the development and/or acceptance of EBP; enable health insurers to dictate which CM interventions they will fund; highlight the medico-legal and ethical obligations of providing EBP; reconceptualise hierarchies of evidence through consideration of totalities of evidence - *Preference*: Encourage regulators, government and media to debate and/or initiate conversations on EBP in CM; encourage uptake of evidence-based CM among non-CM clinicians; ensure consumers are partners in determining what relevant evidence is; enable educators to influence the type of information/evidence that is shared and/or considered acceptable in institutions

Cerritelli et al. (2021) [19]	**Structural:** - *Availability*: Lack of time; lack of research evidence in osteopathy	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in osteopathic practice - *Utility*: Belief that journals/textbooks/research findings are useful for day to day practice, and EBP assists clinical decision-making **Structural:** - *Accessibility*: Access to the Internet in the workplace, free online databases, and full-text articles - *Appropriateness*: Provision of critical reviews of research evidence related to osteopathy **Cognitive:** - *Acquisition*: Access to online education materials related to EBP; desire to improve EBP skills
Goldenberg et al. (2017) [33]	**Attitudinal:** - *Utility*: 'research' and 'science' had historically been used against the profession and there is a belief/fear that EBP would be used in the same way **Cultural:** - *Philosophy*: Fear that EBP and research would lead to standardization and concomitant loss of individualisability of care (an important naturopathic axiom)	**Cultural:** - *Preference*: Patients demanding research and evidence-based therapies from their naturopathic practitioners - *Propulsion*: Profession leaders from across generations moving the profession in a direction more embracing of research; research-trained naturopaths taking leadership positions in naturopathic institutions to further shift attitudes (supportive of research/EBP) within the community; integrating a research track within annual conferences; encouraging naturopaths to undertake research degrees
Gowan-Moody et al. (2013) [34]	**Cognitive:** - *Acquisition*: Insufficient training in EBP skills at the pre-service and post-graduation levels of education, which results in low levels of confidence in EBP; limited skills in critically appraising quantitative research, analysing/interpreting statistical data, and identifying bias in research - *Application*: No mastery in how to conduct a literature search; limited experience reading and appraising qualitative research	**Attitudinal:** - *Utility*: Acceptance that research/EBP leads to improved patient care **Cognitive:** - *Appreciation*: Recognition that research utilisation depends, at least in part, on the activity of seeking out and reading empirically derived information
Hadley et al. (2008) [35]	**Cognitive:** - *Acquisition*: Inadequate research training - *Application*: Low confidence in assessing research study designs, generalisability, bias, sample size and statistical tests	**Cognitive:** - *Acquisition*: Undertaking further training to conduct EBP
Hu et al. (2004) [37]	**Structural**: - *Availability*: Lack of time - *Appropriateness*: Poor quality literature; limited reliability of evidence; language barrier - *Accessibility*: Difficulty acquiring evidence **Cognitive:**	Enablers not reported

	- *Acquisition*: Too much new knowledge **Cultural:** - *Philosophy*: Different theory systems; different modes of diagnosis and treatment - *Preference*: Clinical decisions based mainly on personal experience	
Kim & Cho (2014) [20]	**Attitudinal:** - *Utility*: Concern that evidence does not always show best practice in CM; perception that pursuing evidence in CM is meaningless **Structural:** - *Availability*: EBP places demands on already over-loaded practitioners; too little evidence; lack of time - *Accessibility*: Poor awareness and misunderstanding of relevant databases - *Appropriateness*: Local databases comprise information concerning commercial products **Cognitive:** - *Acquisition*: Burden of learning new skills - *Appreciation*: Unfamiliarity with technical terms, concepts and application of EBP **Cultural:** - *Philosophy*: Differences between the fundamental concepts of EBP and CM; fear that applying EBP may harm the identity of CM	**Attitudinal:** - *Unity*: Perception that EBP guides the best treatment and enables standardised and effective treatment **Structural:** - *Availability*: Generate CM guidelines and protocols; disseminate evidence-based summaries - *Appropriateness*: Ensure research is carried out by reputable institutes to ensure quality, reliability and credibility of evidence; ensure evidence is relevant to practice - *Accessibility*: Provide comprehensive information/evidence resources
Lawrence et al. (2008) [36]	**Attitudinal:** - *Utility*: A belief that best practice guidelines can be spun **Structural:** - *Availability*: Lack of literature to support widely accepted procedures **Cognitive:** - *Acquisition*: Lack of training on EBP within institutions **Cultural:** - *Preference*: Varied acceptance of EBP as educational institutions have their own culture and guidelines	**Structural:** - *Availability*: Provision of funding to design and implement evidence-based approaches/resources **Cultural:** - *Preference*: Acknowledging patients require more information to help guide their care-related decisions; educating patients as to what constitutes high quality care using an evidence based approach; empowering patients to make things happen at the practitioner and state level to drive the provision of high quality care - *Philosophy*: Integrating EBP into the value system of educational institutions
Leach (2022) [42]	**Structural:** - *Availability*: Lack of time; lack of clinical evidence in naturopathy **Cultural:** - *Preference*: Patient treatment preference	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in osteopathic practice - *Utility*: Belief that professional literature and research findings are useful for day to day practice **Structural:** - *Accessibility*: Access to the Internet in the workplace, free online databases,

		online databases that require license fees, and full-text journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to the field, critically appraised topics relevant to the field, tools that facilitate critical appraisal, and research rating tools **Cognitive:** - *Acquisition*: Access to online education materials related to EBP; desire to improve EBP skills
Leach & Gillham (2011) [38]	**Structural:** - *Availability*: Lack of time; lack of clinical evidence in CM **Cognitive**: - *Acquisition*: Inadequate skills in locating, critically appraising and interpreting research **Cultural:** - *Preference*: Lack of industry support for EBP	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in CM practice - *Utility*: Belief that professional literature and research findings are useful for day to day practice, and EBP assists with clinical decision making **Structural:** - *Accessibility*: Access to the Internet in the workplace, free online databases, online databases that require license fees, and full-text journal articles - *Appropriateness*: Access to critically appraised topics, and reviews of research evidence **Cultural:** - *Acquisition*: Access to online education materials related to EBP; desire to improve EBP skills
Leach et al (2018) [39]	**Cognitive:** - *Application*: Lack of engagement with available research among practitioners - *Appreciation*: Lack of understanding / awareness of available research among practitioners **Cultural:** - *Philosophy*: Tension between hierarchy of evidence and totality of evidence; concern that the hierarchy of evidence is underpinned by a positivist paradigm, which does not serve CM well - *Propulsion*: Lack of EBP leadership in CM; lack of action to progress EBP in CM	**Cognitive:** - *Appreciation*: Acknowledge the original definition of EBP, which refers to the best available evidence regardless of its hierarchy; recognise that the EBP model is about bringing together all three original components - *Acquisition*: Educate those within and outside the industry about EBP in CM **Cultural:** - *Philosophy*: Re-focus priorities by moving away from efficacy, and toward safety and other forms of evidence that are clinically relevant to providers and users of CM; address the epistemological/paradigmatic issues of EBP; define evidence - *Preference*: Empower consumers to be better informed, activated and interested in EBP and CM; encourage clinicians to collaborate with regulatory bodies and other health professions - *Propulsion*: Encourage regulatory authorities to drive changes in CM practice; establish an EBP leadership group in CM
Leach et al. (2019) [21]	**Structural:** - *Availability*: Lack of time; lack of clinical evidence in osteopathy	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in osteopathic practice - *Utility*: Belief that professional literature and research findings are useful for day to day practice, EBP assists with clinical decision making, EBP improves the quality of patient care, and EBP is fundamental to the advancement of the

		osteopathic profession **Structural:** - *Accessibility*: Access to the Internet in the workplace, free online databases, online databases that require license fees, and full-text journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to osteopathy, critically appraised topics relevant to osteopathy, tools that facilitate critical appraisal, and research rating tools **Cognitive:** - *Acquisition*: Access to online education materials related to EBP; desire to improve EBP skills
Leach et al. (2020) [40]	**Structural:** - *Availability*: Lack of clinical evidence in osteopathy	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in osteopathic practice - *Utility*: Belief that professional literature and research findings are useful for day to day practice, EBP assists with clinical decision making, and EBP improves the quality of patient care **Structural:** - *Accessibility*: Access to the Internet in the workplace, free online databases, online databases that require license fees, and full-text journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to osteopathy, critically appraised topics relevant to osteopathy, tools that facilitate critical appraisal, and research rating tools **Cognitive:** - *Acquisition*: Access to online education materials related to EBP; desire to improve EBP skills
Leach et al. (2021) [41]	**Attitudinal:** **Structural:** - *Availability*: Lack of time; lack of clinical evidence in chiropractic **Cognitive:** - *Acquisition*: Insufficient skills in locating research, critically appraising the literature, interpreting research, and applying research findings to practice **Cultural:** - *Preference*: Patient treatment preference	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in chiropractic practice; EBP is fundamental to the advancement of the profession - *Utility*: Belief that professional literature and research findings are useful for day to day practice, EBP assists with clinical decision making, and EBP improves the quality of patient care **Structural**: - *Accessibility*: Access to the Internet in the workplace, free online databases, and full-text journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to chiropractic **Cognitive:** - *Acquisition*: Desire to improve EBP skills

Roecker et al. (2013) [43]	**Structural:** - *Availability*: Lack of time; lack of clinical evidence	**Structural:** - *Accessibility*: Access to the Internet in the workplace, free online databases in the workplace, and full-text journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to chiropractic **Cognitive:** - *Acquisition*: Access to online education materials related to EBP
Schneider et al. (2015) [44]	**Attitudinal:** **Structural:** - *Availability*: Lack of time; lack of clinical evidence for CM **Cultural:** - *Propulsion*: Lack of incentive - *Preference*: Lack of industry support for EBP	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in chiropractic practice - *Utility*: Belief that professional literature and research findings are useful for day to day practice, EBP assists with clinical decision making, EBP improves the quality of patient care, and EBP is fundamental to the advancement of the chiropractic profession **Structural:** - *Accessibility*: Access to the internet in the workplace, free online databases, online databases that require license fees, and full-text journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to chiropractic, critically appraised topics related to chiropractic, tools that facilitate critical appraisal, and tools for rating research **Cognitive:** - *Acquisition*: Access to online education materials related to EBP; desire to improve EBP skills
Snow (2017) [45]	**Structural:** - *Availability*: Lack of clinical evidence in herbal medicine	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in herbal medicine practice - *Utility*: Belief that professional literature and research findings are useful for day-to-day practice, EBP assists with clinical decision making, and EBP improves the quality of patient care **Structural:** - *Accessibility*: Access to the internet in the workplace, free online databases, and full-text journal articles **Cognitive:** - *Acquisition*: Desire to improve EBP skills
Spence & Li (2013) [46]	**Structural:** - *Availability*: Time constraints - *Accessibility*: Limited evidence resources; limited learning environment **Cognitive:** - *Appreciation*: Limited understanding of EBP - *Application*: Lack of opportunity to practice EBP	**Cognitive:** - *Acquisition*: Regular attendance at seminars, workshops and lectures related to EBP; Ensuring TCM practitioners receive formal university education

	Cultural: - *Philosophy*: Challenges of reductionism and positivist tradition in EBP; dominant focus on clinical experience in TCM	
Stomski et al. (2008) [47]	**Attitudinal:** - *Utility*: Doing research is not a high priority	**Attitudinal:** - *Urgency*: Perception that research is important for growing professional practice, and finding and reading research evidence is a priority
Stuttard (2002) [48]	**Structural:** - *Acquisition*: Lack of ongoing training and assistance with EBP **Cognitive:** - *Application*: Lack of insight about what could or should be done - *Appreciation*: Inability to read or understand research	**Attitudinal:** **Structural:** - *Accessibility*: Develop skills in finding and reading research; access to websites and databases to improve exposure to much-needed research and evidence **Cognitive:** - *Acquisition*: Deliver forums for the presentation and discussion of study results **Cultural:** - *Propulsion*: Establish a task force or guiding committee to move things forward - *Preference*: Build a culture of writing and publishing; foster practitioner networking for the purposes of training and exchanging ideas and views; and collaborate with other health care professions to share good practice
Sullivan et al. (2017) [49]	**Structural:** - *Availability*: Lack of clinical evidence in yoga therapy	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in yoga therapy practice - *Utility*: Belief that professional literature and research findings are useful for day to day practice, EBP assists with clinical decision making, EBP improves the quality of patient care, and EBP takes into account a therapist's clinical experience when making clinical decisions **Structural:** - Accessibility: Access to free online databases in the workplace, and full-text journal articles **Cognitive:** - *Acquisition*: Access to online education materials related to EBP
Sundberg et al. (2018) [50]	**Structural:** - *Availability*: Lack of time; lack of clinical evidence in osteopathy	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in osteopathy practice - *Utility*: Belief that professional literature and research findings are useful for day to day practice, and EBP assists with clinical decision making, and EBP improves the quality of patient care **Structural:**

		- *Accessibility*: Access to the internet in the workplace, free online databases, online databases that require license fees, and full-text journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to osteopathy, and critically appraised topics related to osteopathy **Cognitive:** - *Acquisition*: Access to online EBP education materials; desire to improve EBP skills
Suter et al. (2007) [51]	**Structural:** - *Acquisition*: Lack of research education; lack of research capacity and critical appraisal skills	**Attitudinal:** - *Utility*: Perception that research adds credibility to the discipline, improves patient care, and helps evaluate existing treatments **Cultural:** - *Propulsion*: Provide professional association incentives (e.g. education credits or practitioner cooperatives) to foster research uptake and positive EBP behaviour
Veziari et al. (2021) [52]	**Structural:** - *Appropriateness*: Publication bias (negative/positive) poses a challenge to locating balanced research evidence to inform CM decision-making; inconsistencies/uncertainties in CM research findings - *Accessibility*: Limited access to evidence; limited awareness of clinical practice guidelines - *Availability*: Limited time to apply evidence **Cognitive:** - *Acquisition*: Limited knowledge and skills to appraise/apply/locate/communicate research evidence **Cultural:** - *Preference*: Lack of institutional support; patient expectations that are contrary to research evidence - *Philosophy*: Diverse views on what constitutes research evidence - *Propulsion*: Little professional obligation to use research evidence to inform practice	Enablers not reported
Walker (2014) [53]	**Structural:** - *Availability*: Lack of time - *Accessibility*: Lack of information resources - *Appropriateness*: Limited generalisability of research findings to patient population **Cognitive:** - *Application*: Inability to apply research findings to individual patients	**Cognitive:** - *Application*: Practitioner confidence in their ability to critically review professional literature, and find relevant research

Weber & Rajendran (2018) [54]	**Structural:** **-** *Availability:* Insufficient time **Cognitive:** **-** *Application:* Inability to apply research findings to patients	**Attitudinal:** - Urgency: Perceived necessity of EBP in osteopathic practice - Utility: Belief that professional literature and research findings are useful for day-to-day practice, EBP assists with clinical decision making, and EBP improves the quality of care **Cognitive:** - Acquisition: Desire to develop/improve skills related to EBP
Wong et al. (2021) [55]	**Structural:** - *Accessibility*: No access to subscribed medical databases - *Appropriateness*: Limited external and model validity of randomised controlled trials and systematic reviews, which seldom investigate the 'effectiveness' of traditional Chinese medicine **Cognitive:** - *Acquisition*: Lack of training - *Application*: Difficulty interpreting and using research results - *Appreciation*: Lack of understanding of the basics of clinical research methods and principles of EBP	**Attitudinal:** - *Unity*: Share positive evidence to promote interprofessional collaboration **Structural:** - *Accessibility*: Create standardised treatment protocols to foster best practice; use open-access websites to share research results and inform practice - *Application*: Invite TCM experts to give contextual or applicability comments for each article synopsis, to help identify how/when to apply evidence-based treatments to different patients **Cognitive:** - *Acquisition*: Complete EBP training
Woo & Cho (2012) [56]	**Structural:** - *Availability*: Lack of time - *Appropriateness*: Disparity between research evidence and actual practice; unreliable data - *Accessibility*: Difficulty accessing evidence; inconvenient search engines **Cognitive:** - *Acquisition*: Lack of background knowledge - *Application*: Difficulty applying research findings to practice due to differences in disease categorisation between TKM and conventional medicine, and the highly customised nature of TKM - *Appreciation*: Difficulty understanding research language	**Structural:** **-** *Accessibility*: Develop a centralized database of TKM research **Cognitive:** - *Acquisition*: Complete research education **Cultural:** - *Philosophy*: Create a new EBP method that encompasses the theory of TKM
UNPUBLISHED STUDIES		

Leach et al. (2022a) [57]	**Attitude:** - *Utility*: Lack of interest in EBP; lack of relevance to naprapathic practice **Structural:** - *Accessibility*: Lack of resources (i.e.: computer, internet, online databases) **Culture:** - *Preference*: Lack of colleague support for EBP; lack of industry support for EBP	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in naprapathy practice - *Utility*: Belief that professional literature and research findings are useful for day to day practice, EBP assists with clinical decision making, EBP improves the quality of patient care, and EBP is fundamental to the advancement of naprapathy **Structural:** - *Accessibility*: Access to the internet in the workplace, and free online databases in the workplace **Cognitive:** - *Acquisition*: Desire to improve EBP skills
Leach et al. (2022b) [58]	**Structural:** - *Availability*: Lack of clinical evidence in naturopathy	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in naturopathic practice - *Utility*: Belief that professional literature and research findings are useful for day to day practice, EBP takes clinical experience into account, EBP assists with clinical decision making, EBP improves the quality of patient care, and EBP is fundamental to the advancement of naturopathy **Structural:** - *Accessibility*: Access to the internet in the workplace, free online databases in the workplace, online databases that usually require license fees, and full-text/full-length journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to naturopathy, critically appraised topics related to naturopathy, critical appraisal tools, and research rating tools **Cognitive:** - *Acquisition*: Access to online EBP education materials; desire to improve EBP skills
Leach et al. (2022c) [59]	**Structural:** - *Availability*: Lack of time; lack of clinical research evidence for manual therapy **Culture:** - *Preference*: Lack of industry support for EBP	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in manual therapy practice - *Utility*: Belief that professional literature and research findings are useful for day to day practice, EBP takes clinical experience into account, EBP assists with clinical decision making, EBP improves the quality of patient care, and EBP is fundamental to the advancement of manual therapy **Structural:** - *Accessibility*: Access to the internet in the workplace, free online databases in the workplace, online databases that usually require license fees, and full-text/full-length journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to manual therapy, critically appraised topics related to manual therapy, critical

		appraisal tools, and research rating tools **Cognitive:** - *Acquisition*: Access to online EBP education materials; desire to improve EBP skills
Leach et al. (2022d) [60]	**Structural:** - *Availability*: Lack of time; lack of clinical research evidence in CM	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in CM - *Utility*: Belief that professional literature and research findings are useful for day to day practice, EBP takes clinical experience into account, EBP assists with clinical decision making, EBP improves the quality of patient care, and EBP is fundamental to the advancement of CM **Structural:** - *Accessibility*: Access to the internet in the workplace, free online databases, online databases that require license fees, and full-text journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to CM, critically appraised topics related to CM, critical appraisal tools, and research rating tools **Cognitive:** - *Acquisition*: Access to online EBP education materials; desire to improve EBP skills
Leach et al. (2022e) [61]	**Structural:** - *Availability*: Lack of time; lack of clinical research evidence in naturopathy - *Accessibility*: Lack of resources (i.e.: computer, internet, online databases) **Cognition:** - *Acquisition*: Insufficient skills in locating, interpreting, and appraising research **Culture:** - *Preference*: Patient treatment preference	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in naturopathy - *Utility*: Belief that professional literature and research findings are useful for day to day practice, EBP takes clinical experience into account, EBP assists with clinical decision making, EBP improves the quality of patient care, and EBP is fundamental to the advancement of naturopathy **Structural:** - *Accessibility*: Access to the internet in the workplace, free online databases, online databases that require license fees, and full-text journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to naturopathy, critically appraised topics related to naturopathy, critical appraisal tools, and research rating tools **Cognitive:** - *Acquisition*: Access to online EBP education materials; desire to improve EBP skills
Myhrvold et al. (2022) [62]	**Structural:** - *Availability*: Lack of time; lack of clinical evidence in chiropractic **Cognition:** - *Acquisition*: Insufficient skills in locating, interpreting and appraising	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in chiropractic - *Utility*: Belief that professional literature and research findings are useful for day to day practice, EBP takes clinical experience into account, EBP assists

	research **Culture:** - *Propulsion*: Lack of incentive to participate in EBP	with clinical decision making, EBP improves the quality of patient care, and EBP is fundamental to the advancement of chiropractic **Structural:** - *Accessibility*: Access to the internet in the workplace, free online databases, online databases that require license fees, and full-text journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to chiropractic, and critically appraised topics related to chiropractic **Cognitive:** - *Acquisition*: Access to online EBP education materials; desire to improve EBP skills
Pelletier et al. (2022) [63]	**Attitude:** - *Utility*: Lack of relevance to osteopathic practice **Structural:** - *Availability*: Lack of time; lack of clinical research evidence in osteopathy	**Attitudinal:** - *Urgency*: Perceived necessity of EBP in osteopathy - *Utility*: Belief that professional literature and research findings are useful for day to day practice, EBP takes clinical experience into account, EBP assists with clinical decision making, EBP improves the quality of patient care, and EBP is fundamental to the advancement of osteopathy **Structural:** - *Accessibility*: Access to the internet in the workplace, free online databases, online databases that require license fees, and full-text journal articles - *Appropriateness*: Provision of critical reviews of research evidence relevant to osteopathy, critically appraised topics related to osteopathy, critical appraisal tools, and research rating tools **Cognitive:** - *Acquisition*: Access to online EBP education materials; desire to improve EBP skills

CM – Complementary medicine; EBP – Evidence-based practice

Supplement 3. Search terms and combinations

The search used the following terms and combinations:

1. Barrier*.kw OR obstacle*.kw OR challenge*.kw OR difficult*.kw
2. Enabler*.kw OR facilitate*.kw OR support.kw
3. 1 OR 2
4. Evidence-based practice.mh OR evidence-based medicine.mh OR evidence-informed practice.kw OR evidence implementation.kw OR implementation science.mh OR knowledge translation.mh OR translational research.mh
5. Acupuncture.mh OR alternative medicine.kw OR ayurvedic medicine.mh OR chiropractic.mh OR complementary therapies.mh OR complementary medicine.kw OR herbal medicine.mh OR homoeopath*.kw OR applied kinesiology.mh OR massage.mh OR myotherapy*.kw OR naturopath.mh OR nutritionists.mh OR osteopathic physicians.mh OR osteopath*.kw OR reflexology.kw OR reiki.kw OR tai ji.mh OR traditional Chinese medicine.mh OR yoga.mh
6. 3 AND 4 AND 5

Supplement 4. PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	p.1
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	p.2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	pp.3-4
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	p.4
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	p.4
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.	p.5
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	p.5
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.	p.6
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.	p.6
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.	p.6
	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.	p.6
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 independently, and if applicable, details of automation tools used in the process.	p.6
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.	NA
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)).	NA
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	NA
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	NA
	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.	p.6-7
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	NA
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	NA
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	p.6-7

Section and Topic	Item #	Checklist item	Location where item is reported
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	NA
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.	p.6
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	p.6
Study characteristics	17	Cite each included study and present its characteristics.	Supp. File
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	pp.21-23
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.	Supp. File
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	pp.7-11
	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.	NA
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	NA
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	NA
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	pp.21-23
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	NA
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	pp.11-13
	23b	Discuss any limitations of the evidence included in the review.	pp.13-14
	23c	Discuss any limitations of the review processes used.	pp.13-14
	23d	Discuss implications of the results for practice, policy, and future research.	pp.11-13
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.	p.4
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	p.4
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	NA
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	p.14
Competing interests	26	Declare any competing interests of review authors.	p.14
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.	p.15

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
For more information, visit: http://www.prisma-statement.org/