

implications for practice

This manuscript is the protocol for a systematic scoping review which is intended to answer the following questions:

What is the extent and nature of the existing evidence regarding osteopathic education?

Are there any elements of the literature which demonstrate good practice that can be adopted in wider osteopathic educational practice?

Are there any gaps within the evidence base which subsequent research can explore?

To date no systematic reviews have been conducted on this topic and this review will highlight the extent of the literature and guide future research priorities.

Osteopathic Education: A Scoping Review Protocol

MacMillan A^{1,2*} Jerry Draper-Rodi^{2,3}

*: corresponding author: Andrew MacMillan, Andrew.macmillan@uco.ac.uk

1. University of Portsmouth
2. University College of Osteopathy
3. National Council for Osteopathic Research, 275 Borough High Street, London SE1 1JE

Abstract

Objective: The objective of this scoping review is to chart and appraise the available evidence regarding osteopathic education.

Introduction: The extent and quality of the evidence regarding osteopathic education is not known. The available evidence mostly consists of small trials, qualitative interviews, cross-sectional surveys and conceptual commentaries, therefore a review to chart and appraise the available evidence is warranted.

Inclusion criteria: The review is intended to include papers related to undergraduate, postgraduate and preregistration osteopathic education. Qualitative, quantitative, mixed methods and opinion pieces and grey literature will be sought. This review will exclude papers regarding education as a treatment modality and will exclude papers regarding osteopathy as a medical profession, as is seen in a North American context.

Methods: The study will be conducted using OVID , PubMed, ERIC databases, and hand searches for key words will be conducted in key osteopathic journals.

Reference lists of included papers will be screened for relevant papers, forwards and backwards citation tracking and key authors will be searched for similar publications which may be germane.

Papers not available in English, French, Spanish, German or Portuguese will be excluded. There will be no limit placed upon date of publication.

Keywords

Education; Osteopathy; Pedagogy

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Osteopathic practice, training and regulation differ globally, regulatory frameworks range from statutory regulation to voluntary registers [1,2]. Typically, osteopathic education takes place in a further or higher educational setting such as a university or private institution.

Osteopathy, in the United Kingdom (UK), is a statutorily regulated healthcare profession. Practicing osteopathy is contingent on completion of set standards of education to registrar with the General Osteopathic Council (GOsC). Osteopathic training in the UK is informed by a range of standards and benchmarks, set by the regulator and other stakeholder institutions[3] [4]. Historically, in the United Kingdom, osteopathy has been taught in small monotechnic institutions, usually by osteopaths and informed by the wider pedagogical conventions in further and higher education. Osteopathic graduates were awarded a diploma in osteopathy until the early 1990s at which time and in line with regulatory change and the introduction of the Osteopaths Act[5], a bachelor's in science degree was awarded and validated by external universities[6]. UK osteopathic educational institutions are now either validated by external universities, embedded in universities or have teaching degree awarding powers themselves, with undergraduate training typically between 4 and 5 years, to award a recognised qualification such as a Bachelor's Degree in Osteopathy (BOst) or integrated Master's Degree (MOst). An independent report

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commissioned by the Institute of Osteopathy, states that Osteopathy's educational and regulatory institutions and processes are robust and mature but not always well understood outside the profession [7]. This signified higher levels of academic attainment and accreditation for osteopathic education, which has culminated in one UK institution gaining taught degree awarding powers as a stand-alone institution and embedded within existing traditional university structures. Along with the nature of the changes to education and accreditation osteopathic educators have undergone a process of professionalisation with many holding advanced degrees and teaching qualifications.

The ways in which this professionalisation process has informed osteopathic educational delivery are not fully known as the extent and quality of the evidence regarding osteopathic education has not been previously reviewed. A preliminary search revealed that no previous scoping or systematic reviews are available and no protocol registrations were returned. The available evidence discovered in the preliminary search is heterogeneous and consists of small trials [8] [9] surveys of osteopathic students and educators[10], qualitative interviews[11] content analysis [12] and multiple opinion pieces[13][14] Therefore, a scoping review to chart the breadth and depth of the available literature is warranted[15].

Aim

The aim of this scoping review is to assess the extent of the literature regarding

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osteopathic education. This may inform educational delivery, planning and future research priorities.

Review questions

What is the extent and nature of the existing evidence regarding osteopathic education?

Are there any elements of the literature which demonstrate good practice that can be adopted in wider osteopathic educational practice?

Are there any gaps within the evidence base which subsequent research can explore?

Design

The proposed scoping review will be conducted in accordance with Arksey and O'Malley's [16]scoping review methodology and Levac et al. [17] suggested extension to this method; and the PRISMA extension for scoping reviews will be used [18].

Eligibility criteria

The scoping review will follow the Population Concept Context (PCC) framework[19] as detailed below.

□ Population

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All undergraduate and post graduate osteopathic education delivered or investigated in an accredited educational institution.

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□ Concept

Education of osteopaths and osteopathic students, this specifically refers to manual types of osteopathy most commonly associated with European styles of osteopathy with the exclusion of osteopathy as a medical profession as is the case in the United States . The review is not limited to training in manual osteopathic techniques. This review will exclude papers discussing education as a treatment modality or education of patients, by osteopaths. All papers regarding education in osteopathy or of osteopaths, such as anatomy instruction or other academic and practical pedagogy will be sought.

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□ Context

Undergraduate and postgraduate training of osteopaths and osteopathy students, within an osteopathic educational institution setting as part of a formal qualification.

This review is limited to English, French, German, Spanish and Portuguese languages but not by any specific geographical area.

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Types of Sources

This review will include all published peer reviewed sources which meet the inclusion criteria, regardless of design or methodology. Qualitative, Quantitative and mixed methods research, grey literature, including doctoral thesis will be sought as will opinion pieces if published in a peer reviewed format. Depending on the quantity of evidence retrieved it may be appropriate to apply more stringent criteria, giving priority to higher levels of evidence. This decision will be made and transparently presented on completion of the formal search and preliminary screening phases. Results will be limited to those published in an electronically retrievable format at any time point.

Search strategy

The search strategy will aim to locate both published and unpublished studies, which are available online. An initial pilot search of OVID MEDLINE was undertaken to identify relevant key words and MeSH terms. The text words contained in the titles and abstracts of relevant articles, and the index terms used to describe the articles were used to develop a full search strategy for OVID Medline (see Appendix 1). The search strategy will be adapted for each included database. The reference list of all included sources of evidence will be screened for additional studies and backwards and forwards citation tracking will be implemented to expand the search. The search strategy will be reviewed by an expert research librarian to maximise the yield and relevance of the search. Osteopathic educators and researchers will be consulted to widen the search strategy. The review team consists of experienced osteopathic

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educators and researchers who may be broadly familiar with the literature offering an insider perspective, ensuring key terms are not omitted and incorrectly indexed articles are retrieved. Hand searches will be conducted using the International Journal of Osteopathic Medicine, the Journal of Osteopathy and any other identified professional journals. If items cannot be retrieved, via institutional access and interlibrary loan requests, the author for correspondence will be contacted to request a copy of the article. Grey literature will be sought, and trial registries will be screened for works in development which may be of relevance.

Source of Evidence selection

Following the search, all identified citations will be uploaded into Endnote (version 20.2.1) and duplicates removed. Potentially relevant sources will be retrieved in full and their citation details imported into Covidence online software. Following a pilot by two independent reviewers, titles and abstracts will be screened by two independent reviewers for assessment against the inclusion and exclusion criteria.

The included texts at this stage will then be read in full by blinded independent members of the review team, reasons for exclusion will be recorded at this stage and disagreements will be resolved by consensus.

The results of the search and the study inclusion process will be reported in full in the final scoping review and presented in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for scoping reviews [18].

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Data Extraction

10 Data will be extracted by two or more independent reviewers using a proforma data
11 extraction tool developed by the reviewers and piloted on two papers by two 12
13 independent reviewers prior to the data extraction phase. The data extracted will
14 describe the PCC of the evidence discussed and be used to inform a narrative
15 synthesis of results. Disagreements will be resolved by the mediation of a third
16 reviewer. Although formal Risk of Bias (ROB) assessment is not a requirement of
17 Scoping review methodology[16], it will be conducted within this review. The
18 intention of this review is to inform policy and research priorities, therefore, an 23
24 assessment of the quality as well as the quantity of available evidence is deemed 25
26 necessary. This will prevent lower quality evidence informing practice and entering
27 the scholarly record via this review, without adequate appraisal. The Joanna Briggs
28 checklists, suitable for each individual study design, will be applied to each included
29 full text and conducted independently by two blinded members of the review team.
30 This will reduce the likelihood of individual reviewer’s bias or one authorial voice 35
31 framing the results.
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37 38 *Data Analysis and*
39 *Presentation*

40 Data will be presented using a PRISMA flow chart, and either separate tables for
41 study characteristics, results and risk of bias or an amalgamated table. The choice of
42 how to present results will be informed by the total number and complexity of the
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results retrieved in this review. Overall risk of bias will be reported, and colour coded as high, medium or low risk of bias. Data will be synthesised and reported in a narrative fashion within the results section. The final synthesis will be agreed by all 50 members of the research team who meet the criteria for authorship of the final manuscript.

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Conflicts of interest

There is no conflict of interest in this project. All authors of this review are osteopathic educators or researchers. This manuscript was developed as part of an internal exercise in enhancing research culture within an osteopathic educational institution.

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Appendices

Appendix I: Search strategy for Ovid Medline

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Medical/ or Education, Medical, Graduate/ or Education/ or Education, Medical,
Continuing/ or Competency-Based Education/ or Education, Medical,
Undergraduate/ or Education, Professional/ or Health Education/ or Education,
Distance/ OR Teaching.mp

AND

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Conflicts of interest

There is no conflict of interest in this project. All authors of this review are osteopathic educators or researchers. This manuscript was developed as part of an

internal exercise in enhancing research culture within an osteopathic educational institution.

author agreement

We the undersigned declare that this manuscript is original, has not been published before and is not currently being considered for publication elsewhere. We confirm that the manuscript has been read and approved by all named authors and that there are no other persons who satisfied the criteria for authorship but are not listed. We further confirm that the order of authors listed in the manuscript has been approved by all of us. Andrew MacMillan is the correspondence author for this manuscript.