



Commentary

The role of osteopathy in clinical care: Broadening the evidence-base

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ABSTRACT

Osteopathy is a system of health care practiced in various countries throughout the world that focuses on osteopathic manual techniques as a cornerstone of patient care. However, we still know little about the practice, role and use of osteopathy within the broader health system in most countries. With this in mind, this paper proposes a possible framework for advancing further research on this topic. The framework is divided into issues associated with core stakeholders including health consumers, osteopaths, other health professionals, and policymakers and funding bodies. The development of a rigorous health services research agenda around this topic has much to offer and the framework outlined here is offered with the hope of inspiring a broader field of inquiry into osteopathy in the clinical care setting.

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1. Introduction

Osteopathy is a health profession which primarily utilises physical examinations and treatments and focuses on integrating the neuro-musculoskeletal, visceral and craniosacral systems [1]. The practice of osteopathy, whilst broadly fitting within this definition, varies across different countries [1]. Most commonly, osteopathy is practiced as a manual therapy and professional training primarily centres on osteopathic manual techniques as a cornerstone of effective treatment [1]. One significant exception to this is in the United States where completion of osteopathic professional training results in a licence to practice medicine as an osteopathic physician in line with conventional medical physicians [1]. Alongside international variability, the position of osteopathy within the delivery of health care in each country differ from nation to nation.

Osteopaths commonly treat musculoskeletal conditions such as back pain, shoulder pain and neck pain as well non-specific musculoskeletal problems [2–4]. The prevalence of osteopathy use amongst the general population in Australia, United Kingdom and United States is reported up to 10% [3,5], with little difference in rates of use amongst subpopulations such as individuals with back pain (UK: 13.5% [6]; Australia: 8.8% [7]) and pregnant women (6.2%)

[8]. Manual treatments and interventions performed by osteopaths include soft tissue techniques, joint articulation and mobilisation, high velocity low amplitude (HVLA) manipulation, muscle energy and cranial techniques, exercise therapy and patient education [4,9]. One of the few areas where the profile of individuals who consult with an osteopath has been investigated is within a population of pregnant women, and even in this case has only received preliminary attention [10]. Despite such context, the role and relevance of osteopaths and the integration of osteopathy in the delivery of health care services generally remain unclear.

1.1. Current research examining osteopathy

Research within the field of osteopathy has primarily focused upon specific topic areas such as applied physiology (including symptom areas and symptoms), education, and efficacy outcomes from osteopathic manipulative treatments (OMT). Conditions which have received research attention across these topic areas include back pain [11–17], headaches [18,19], pregnancy [20,21], and pediatric complaints [22]. A range of studies have also been conducted which include osteopathy as an intervention alongside other manual therapies and therefore do not provide clear information about the value of osteopathy as a discrete therapy [23–25].

Efforts have been made from within the osteopathic profession to identify research priorities for osteopathy, with a primary focus on clinical research [26]. Future research into osteopathy would benefit from an inquiry which extends and complements existing

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areas of research focus. Analysis of studies published over the last five years (since 2011) in the two top osteopathic journals, i.e. the *International Journal of Osteopathic Medicine* and the *Journal of the American Osteopathic Association*, highlights these existing focus areas (Table 1). Whilst this overview does not replace a systematic review of a range of databases and journals and as such may not be a true reflection of the trends in osteopathic research more widely available, the spread of research in the top osteopathy-specific peer-reviewed journals provides a summary of the type of research currently prioritised by the osteopathic research community. Based on this analysis, over two thirds of papers published since 2011 fall within treatment-based clinical interventions or education-based research projects (Table 1). However, the clinical practice of osteopathy is a holistic system of care that encompasses a wide variety of treatments, which are applied to the individual within the framework of osteopathic principles. As such, research examining specific treatments that are used not only by osteopaths but also other health care professions, and which may be applied in a non-osteopathic or non-holistic manner, may have limited value for developing the real-world evidence-base of osteopathy in clinical practice. For example, research which supports a treatment or intervention used by not only osteopaths but by other health professionals offers limited insights into the particular value which may be associated with receiving care from an osteopath rather than other health professionals providing the same treatment.

Notably, beyond clinical research, there is also a real need to undertake empirical enquiry related to the practice, workforce and use of osteopathy in line with a health services research (HSR) approach - defined as “the critical, scientific study of health and health care issues with a focus ranging from international, national and regional populations through to smaller localised/specialised groupings and individuals” [27]. This broadening of the scope of research within osteopathy is essential to inform policymakers, health administrators and other key stakeholders of the current and potential role of osteopathy in the wider health care system. In particular, workforce data, public safety, economics of treatment, and the effectiveness of the broad system of osteopathic holistic care when compared to other care options available within, or as a complement to, the conventional health system are all examples of issues that require attention. A body of work has been published over time which encompasses aspects of HSR such as patient expectations and experiences of osteopathic care [28–34], socio-demographic characteristics and presenting symptoms of osteopathic patients [35–37], and practice approaches of osteopathic physicians [38]. Much of this research has been conducted in the United Kingdom over the past 30 years with additional efforts supported more recently by groups such as the General Osteopathic Council in the UK, which draws upon HSR to inform its policy development and assess the effectiveness of its regulatory processes [39].

The purpose of this paper is to propose one HSR agenda that will allow the future exploration of important areas associated with the role osteopathy can play in health care generally and in the delivery of neuro-musculoskeletal health care specifically. Our intention is to identify a possible range of issues for investigation that we feel may help develop a broader osteopathic research approach to encompass diverse research methodologies ranging from epidemiological studies through to health economic analyses. It is not the intention of this paper to outline a comprehensive research strategy for osteopathy but it is hoped that the proposed agenda will inspire the research community to examine osteopathic clinical care from a range of viewpoints and ultimately help lead to better health care and patient outcomes.

2. A broader range of research inquiry

A range of approaches well suited to expanding our empirical investigation of contemporary osteopathy can be found within the broad field of HSR. The framework outlined below is not definitive but does provide one framework for future HSR exploration of osteopathy and the osteopathic profession.

2.1. The use and users of osteopathy

Patient-centred health care is acknowledged as a vital requirement when developing relevant and appropriate health services [40]. However, developing health services that are responsive to the needs of the population requires a clear understanding of the nature of osteopathy use as well as the characteristics of users. Unfortunately, the existing literature does not yet provide sufficient insights into the behaviours, perceptions, experiences and decision-making of osteopathy users. As such, a number of research questions around osteopathy use and users demand attention including: Which demographics influence osteopathy use amongst the general population? What is the impact of gender and biography upon a patient's decision to seek osteopathic care? And what role does level of education or household income have on enabling or limiting patient access to osteopaths?

The impact of health status and use of other health services on patients' use of osteopathy also requires examination. Key questions surrounding this area include: For which health conditions are individuals consulting with an osteopath? What treatment pathways do osteopathy users follow prior to consulting with an osteopath? What are the reasons patients of osteopaths choose osteopathy rather than other manual therapies and providers for the management of their health? And to what degree are patients consulting osteopaths using other health services concurrent to osteopathic care?

An important area which allows a more nuanced understanding of the use and users of osteopathic health care is the experience,

Table 1

Categorisation of original research articles published in International Journal of Osteopathic Medicine and The Journal of the American Osteopathic Association, 2011–2015.

Journal	Volume: Issue	Applied Physiology	Education	Specific Treatments	Health Services Research	Other
International Journal of Osteopathic Medicine	18	2	4	7	3	2
	17	0	9	4	2	0
	16	1	4	4	0	0
	15	1	1	5	1	0
	14	1	2	3	0	1
The Journal of the American Osteopathic Association	115	14	20	50	1	19
	114	11	21	55	0	10
	113	8	23	42	0	16
	112	15	9	35	0	13
	111	25	12	32	0	20
Total (n)		78	105	237	7	81
Frequency distribution (%)		15%	21%	47%	1%	16%

attitudes and perceptions of osteopathic patients towards their osteopath and osteopathic treatments. In this regard, focus needs to be upon addressing a range of distinct but interrelated questions including: What are patients' experiences and perceptions regarding the safety and risk of osteopathic care? What are the patients' perceptions and experiences of their osteopath's role and value within their broader health care team? What are the experiences of patients regarding the effectiveness of osteopathic treatments?

In answering these and related questions, research will provide practitioners and policy makers with a clearer understanding of the role and value of osteopathy amongst patients and the wider population and will also contribute to debate regarding the relevant scope of osteopathic practice [41], analyses of funding for osteopathic care, and allocated research funding for enquiry focusing upon the safety and effectiveness of osteopathy to support the existing and growing body of evidence in this area [5,15,16,42].

2.2. Osteopaths and the osteopathic workforce

A key component of HSR involves acquiring a clearer understanding of the health professionals providing care to patients with critical elements such as the size, skills and commitment of the health workforce playing a vital role in policy development [43]. For this reason, there is a need to examine and describe the osteopathic workforce both nationally and globally. This includes answering specific research questions such as: Who are the practising osteopaths in terms of their age, gender, years in practice, and levels of education amongst other characteristics? How do osteopaths approach patient care and what is their scope of practice? What practices are employed within osteopathic practice, e.g. regarding diagnosis, treatment, prevention and rehabilitation? What are the practice environments and settings common to contemporary osteopaths? What are the key features of effective patient management by osteopathic practitioners? How do osteopaths see their role with regard to musculoskeletal complaints and other non-musculoskeletal conditions? And how do osteopaths define appropriate care approaches with regards to vulnerable populations such as pregnant women, children and older adults? Whilst there are obvious attempts to provide answers to specific questions in specific countries such as Australia [44,45], UK [37,46,47] and US [2,38], there is a need for a more comprehensive exploration of these issues internationally by the osteopathic research community.

In addition to the above practice specific issues, there are also broader questions related to interprofessional care within complex health systems that require investigation. For example, how do osteopaths see their role within contemporary health care with respect to collaboration and integration with other health professionals (including but not limited to other manual therapy providers)? What are the experiences of osteopaths in communicating with other health professionals providing care to the same patients? What barriers and facilitators do osteopaths perceive to their ability to provide care within the contemporary health system?

Finding answers to questions such as these will provide useful insights to support new and existing practitioners, osteopathic professional organisations, policy makers and funding bodies in their decision-making regarding osteopathy and its role within contemporary health systems.

2.3. Other health professionals

Interprofessional care is one identified ingredient for building effective modern health systems [48] and, whilst efforts have been

made to promote interprofessional care within osteopathy [24,49], it is necessary that this interest extends to research which focuses on cooperation and relationships between osteopaths and other health professionals. A number of research questions in this area require research attention such as: What are the perceptions of other health professionals towards osteopathy and osteopaths? How do other health professionals feel about osteopaths providing integrated or parallel care to the same patients? What role do other health professionals perceive for osteopaths within the health system? And what are the views of other health professionals towards autonomy of osteopaths in clinical practice? Examples of research which address aspects of these questions have been identified in Australia [50], however due to the variability in interprofessional dynamics within health systems around the world, there is a need to undertake similar and related research in all countries and regions that osteopathy is practiced.

In addition, it is important to identify any barriers other health professionals perceive as challenging their collaboration with osteopaths. Investigations into these areas must also be considered within the context of other health professionals overall, but also in the context of sub-groups of manual therapy providers such as orthopaedic surgeons, general practitioners, physiotherapists, chiropractors, and massage therapists to allow comparison between viewpoints and perspectives.

2.4. Policy makers and funding bodies

The provision of health services by the practitioners of one profession is significantly influenced by groups outside of the profession such as policy makers and funding bodies and in this regard osteopathy is no different. Whilst addressing the above research questions offers valuable insights to these other groups, there are also additional areas which are of particular interest when developing policy and funding models within the health system such as safety and cost-effectiveness. The importance of this approach has been clearly identified by leading professional bodies [51] and received preliminary attention from researchers [52].

There is a need to examine the safety of osteopathic care which may address research questions such as: What is the frequency of adverse events associated with osteopathic care in comparison with other health professions? Are there any differences in the rates of adverse events between osteopathic care of different health complaints or across different osteopathic treatment methods or approaches? And is osteopathy any more or less safe for patients from vulnerable populations or complex health states such as pregnant women and children? These questions may be challenging to answer given the difficulties in defining an adverse event in manual therapies which has been previously described [53], however these issues still need ongoing attention to assist policy decisions.

A clearer understanding of the health economics and cost-effectiveness of osteopathic health care is vital for not only policy makers but also health insurers and other third party funders. With regards to this research area there needs to be a focus beyond the preliminary work already available [54] with new research addressing a series of questions for all jurisdictions where osteopathy is practiced including: How does the cost of osteopathic treatment compare with conventional standard care for key health conditions? Are there any conditions for which osteopathic care will save money if used instead of standard care? Are there any conditions for which osteopathic care might cost the same money but is preferred to standard care by patients? And how does osteopathic treatment for chronic health conditions impact on patient quality of life and therefore economic outcomes?

2.5. Implications and future directions

Osteopathic health care and research are by and large clinically driven and to a significant extent focused around manual therapy efficacy and effectiveness. The potential implications of this for the osteopathic community are diverse. On the one hand, it may foster excellence in the application of osteopathic manual therapy treatment techniques applied in the management of specific disorders, which of course is positive to the development of clinical osteopathy. On the other hand, albeit such research efforts are indeed valuable and appreciated, the strong emphasis on this main area of research has so far generally done little to advance a broader understanding of the value and relevance of osteopathy in clinical health care. The latter may be exemplified by the fact that osteopathy, in most jurisdictions around the world, is recognized as a complementary self-regulated profession, rather than being recognized as a licensed health profession amongst medicine, nursing, physiotherapy and psychology etcetera, which it has the potential to be. Hence, for osteopathy to gain acceptance as a legitimate health care option beyond complementary health care practice, it may be crucial for the osteopathic community to broaden its research agenda.

Accordingly, we suggest that future directions of osteopathic research should continue and further improve upon the important work and publications that have already been initiated in the area of HSR, as referenced throughout our text above. Additionally, whilst our intention is not to advise specific research projects, we would like to emphasize that it may be advantageous for the osteopathic research community to conduct several complementing HSR programs of research, from policy and stakeholder issues to clinical management and medico-legal issues, in order to fully explore the range of potential facilitators and barriers of the scope and practice of osteopathic health services. Notably, while HSR is a popular field in a number of health care areas there is a general lack of published (explicit) outlines of the experiences of other professional groups in trying to devise such an agenda. Hence, by expanding research in this direction, possibly supported by the osteopathic community, decision makers at different levels and from different professional groups, from practitioners to patients and policy makers, will more fully understand and appreciate the relevance of integrating clinical and cost-effective osteopathy in their practices and in national health systems.

3. Conclusions

Osteopathic health care is an established but varying part of different health systems internationally. The osteopathic workforce, currently ranging from complementing to being fully integrated with conventional health care, is dependent on further research and development to fully realize its clinical potential and contributions to health care and society. Current osteopathic research has a strong emphasis on studies of selected treatment techniques, physiology and education. While of importance, such research efforts do not reflect the broader multi-disciplinary approach needed to provide comprehensive understanding of the role of osteopathy in wider health care. As this paper has outlined, the adoption of a health services research agenda for osteopathy is one fruitful means by which we can identify, assess and advance the wider contribution (both current and future) of osteopathy in clinical practice for the benefit of patients.

Ethics statement

This commentary does not report original data, therefore ethical clearance was not required.

Implications for clinical practice

No implications for clinical practice.

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