

**National Council for**



**Osteopathic Research**

# **Annual Report**

**2008 – 2009**

**February 2010**

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## **The Role of the National Council for Osteopathic Research (NCOR)**

This is the sixth Annual Report from the National Council for Osteopathic Research (NCOR) since its foundation in March, 2003. NCOR is an independent body that is supported by funding from the General Osteopathic Council (GOsC), the British Osteopathic Association (BOA) and each of the osteopathic educational institutions (OEs) in the United Kingdom. Each of the stakeholders who contribute financially have representatives at NCOR. There are two additional representatives who represent private practitioners and NHS practitioners. The full constitution of NCOR is listed on page 102. All of the OEs' representatives have experience within the field of osteopathic research and are currently involved in the academic institution they represent.

Since its foundation, NCOR has had an independent Chair, Professor Ann Moore. In October, 2003, NCOR held a strategic planning event to formalise its Vision and Mission statements (page 101) and its research strategy for the next five years. A Draft Strategic Plan was formally produced and can be found in the NCOR Annual Report for 2004/5 which is available on the NCOR website ([www.ncor.org.uk](http://www.ncor.org.uk)). A further strategic planning day was held in July, 2009 which re-examined many of NCOR's activities and a strategic plan was devised for the period 2009/10 which was agreed by Council in March 2009.

NCOR is based at the Clinical Research Centre in the School of Health Professions at the University of Brighton. The Chair is Head of the Clinical Research Centre for Health Professions (CRC). A Research Officer, Carol Fawkes, was appointed in February, 2004 and is present at the CRC for four days per week. Liz Lance was appointed as an additional research officer for three days per week in September, 2009 to support the work of NCOR. The CRC funds a part time Senior Research Fellow in Osteopathy post which Dr Janine Leach took up in May, 2004.

The lifeblood of any therapeutic discipline lies in its ability to generate, refine and continuously test new knowledge. Such a commitment is a hallmark of a forward thinking and serious profession and ensures the protection of both patients and professionals. Researching osteopathic practice and learning from that research should be at the heart of the way the profession thinks; it is from this stance that NCOR was created. However, the NCOR approach is not prescriptive. NCOR aims to work with the profession to foster and encourage but not enforce research, and to meet the needs identified by the profession as a whole.

## **Message from the Chair of the National Council of Osteopathic Research**

Welcome to this year's Annual Report from the National Council for Osteopathic Research (NCOR). This report celebrates the end of six years of research infrastructure development within NCOR and the osteopathic profession.

2008-2009 was a busy year for the core NCOR support staff based at the University of Brighton. The report from the NCOR support staff articulates the activities that we have been involved in over the past year. Throughout the year it became clear that the General Osteopathic Council was re-focussing its strategy with regard to support for research, and this has led to increasing uncertainty amongst the NCOR group as a whole, but not least at the NCOR base at the University of Brighton.

Clearly the osteopathic profession does need and many of its members want an evidence base. The best way to achieve this is with the creation of a positive research culture both within the osteopathic educational institutions (OEs) and within the profession itself. This will take some time to develop as we have seen from other professions in the past, and every member of NCOR has a part to play in this quest. The responsibility also lies with the profession itself, with the Osteopathic Educational Institutions, the British Osteopathic Association, and indeed the General Osteopathic Council to ensure that research and evidence plays a large part in their activities, reports, discussions, conferences and curricula. A research culture is a joint responsibility which is why NCOR is potentially a very powerful tool because the constituents all have representation in the groups listed above. However, because individuals are representative of these particular organisations it does not necessarily mean that research is at the heart of all the activities that ensue in these particular organisations.

Over the past year much has been accomplished by the NCOR team. A significant amount of infrastructure is in place to support osteopathic research; we now need to increase our visibility within the profession as a Council, and this will be one of our major priorities for next year. Our second priority will be to develop alternative sources of funding for NCOR or alternative modes of operation and this we hope will be commenced at a meeting of stakeholders on 7<sup>th</sup> May 2010.

I do hope you enjoy reading this report and learning about the activities which have taken place over the last year. Information concerning the activities of the NCOR support staff including myself, the research officers Carol Fawkes, Liz Lance, and research administrator Shirly Mathias is included overleaf.

**Professor Ann Moore**  
**Chair of the National Council for Osteopathic Research**

## Report from the NCOR team

Since the last report was published, a great deal of activity has been undertaken by NCOR in meeting its stated objectives. The areas in which progress has been made are described below.

**Osteopathic Research Evidence:** The introduction of a searchable database of published osteopathic research has been a key objective for NCOR. Considerable time has been spent periodically during the past few years locating and then updating information to be included within the database. Discussions have taken place within the University of Brighton concerning the requirements of such a database and specific software is in the process of being created. This software will allow easy compatibility with the University server to enable easy uploading and maintenance of the data. The software, once written, will also be usable by other osteopathic institutions that also require the facility for a searchable database.

Enquiries from osteopaths, higher education institutions (HEIs) and general practitioners, Primary Care Trusts (PCTs) and students at Osteopathic Educational Institutions (OEIs) continue to be received in growing numbers. There has been a noticeable increase in the number of osteopaths who have been asked to give presentations at high profile events to mixed professional groups. Additionally, increasing numbers of osteopaths have expressed an interest in producing contributions for the International Journal of Osteopathic Medicine (IJOM) and have requested background literature searches and assistance with preparation of their publications. Since the presentation of information outlining the requirements associated with revalidation, the number of enquiries associated with clinical audit continues to grow.

The growth of new researchers is a key priority for the profession. Carol Fawkes acted as a guest assessor at the final year presentations at both the British School of Osteopathy and the British College of Osteopathic Medicine during 2009. The range of projects continues to be extensive and the articulate manner in which they are delivered augers well for the future of the profession.

The focus on Clause 20 in the Code of Practice focussed osteopaths' attention onto the risks associated with osteopathic treatment. In response, a sub-group of NCOR developed a call for proposals to examine this area of clinical practice. The award of funding was announced on 18<sup>th</sup> October, 2007. A research grants governance committee (RGGC) was appointed to monitor the progress of the projects. Since the funding awards were made, some of the projects have finished and publications from the studies have been achieved. Each of the projects and their progress to date is described below:

### **Proposal 1: Adverse events associated with physical interventions in osteopathy and relevant manual therapies.**

This project, undertaken by Dr Dawn Carnes and her team, has now finished and a final report was sent to the GOsC in December, 2009. Dissemination of Dr Carnes work has taken place through the publication of two papers. Carnes D, Mullinger B, Underwood M. Defining adverse events in manual therapies: a modified Delphi consensus study. *Manual Therapy*. 2009; May 12 (EPub).

([http://www.ncbi.nlm.nih.gov/pubmed/19443262?itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum&ordinalpos=1](http://www.ncbi.nlm.nih.gov/pubmed/19443262?itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum&ordinalpos=1)).

A second paper has been published in *Manual Therapy Journal*. Carnes D, Mars TS, Mullinger B, Froud R, Underwood M. Adverse events in manual therapy: a systematic review. *Manual Therapy*. 2010. Jan 21 [Epub ahead of print]. (<http://www.ncbi.nlm.nih.gov/pubmed/20097115>).

Conference presentations have also taken place at the International Conference for Advances in Osteopathic Research held in America in 2008, the British School of Osteopathy study day entitled "Risky Business", and at the Society for Back Pain Research in November, 2009.

**Proposal 2: Communicating risk and obtaining consent in osteopathic practice.**

The successful lead applicant was Dr Janine Leach (University of Brighton) in collaboration with Dr Anne Mandy (University of Brighton), Mr Matthew Hankins (Brighton and Sussex Medical School) and Ms Rachel Ives (College of Osteopaths).

Original collaborators included Natalie Lambert and Philippa Lyon, University of Brighton. Advisors include Professor Julie Stone (Ethics); Mr Paul Grant (Solicitor); Mrs Catherine Goodyear (BOA). The project steering group includes: Mr Tim McClune (RGGC representative), Mrs Bernadette Ranger (service user) and Mr David Balen (insurer for the profession).

The steering group for project 2 has held one meeting in 2009 following the completion of Dr Carnes' project. On the advice of the Research Grants Governance Committee, Project 2 began when Project 1 had been completed and its findings were known. Some changes to the project team and its steering group have taken place due to employment changes and the pregnancy of one of the team. Mr Mark Cage has taken the place of Dr Philippa Lyon; he has similar skills in focus groups. Dr Kevin Lucas has taken the place of Natalie Lambert. Dr Lucas is an experienced researcher with many publications and experience of literature reviewing. Ms Rachel Ives is on maternity leave, but will be contacted to ensure Focus Groups can be conducted and allow input from an Osteopathic Educational Institution on the team.

The Steering Group has confirmed the brief for this project - a literature review of communication with patients which is generic across a wide health care area. The Steering Group agreed that extending the literature to adult learning was too onerous for the 6 month timescale of the project, and should be a recommendation for further work. Dr Leach has begun to identify appropriate papers through her literature search. Further work on the project will continue throughout 2010 and the project will be completed by the end of 2010. Staged reports will continue to be submitted to the RGGC.

**Proposal 3: Insurance claim trends and patient complaints to the profession's regulator.**

The successful lead applicant was Dr Janine Leach (University of Brighton) in collaboration with Dr Anne Mandy (University of Brighton), Professor Elizabeth West (University of Greenwich), Mrs Brenda Mullinger (European School of Osteopathy) and Ms Rachel Ives (College of Osteopaths).

This project has just finished and the report has been submitted to the NCOR Research Grants Governance Committee (RGGC). The RGGC met on 25<sup>th</sup> February and feedback is being given to Dr Leach concerning the final report.

#### **Project 4: Investigating osteopaths' attitudes to managing and assessing risk in clinical settings and patients' experiences and responses to osteopathic treatment.**

The successful lead applicant was Mr Steven Vogel (British School of Osteopathy) in collaboration with Dr Tamar Pincus (Royal Holloway, University of London), Professor Martin Underwood (University of Warwick Medical School) and Dr Sandra Eldridge (Barts and The London).

This is the largest of all of the projects and has now begun after a period of considerable delay due to staff changes at the British School of Osteopathy. The project has been entitled "Clinical Risk, Osteopathy and Management" (CROaM).

An interim report was requested by the RGGC after their last meeting in March, 2009 due to concern about the delay to the project. Confirmation of the appointment of a project research officer and a copy of his/her CV was also requested. Steven Vogel, Principal Investigator for the project supplied an interim report on 1<sup>st</sup> October, 2009, as requested, confirming the appointment of Mr Tom Mars as research officer for the project. A copy of Mr Mars CV was also supplied. The interim report and minutes of the project steering group meeting have also been supplied.

Professor Martin Underwood spent some time describing the CROaM project during a presentation at the British Osteopathic Association annual conference on 14<sup>th</sup> November, 2009. The survey instrument is being developed and the first survey phase of the project will begin in March, 2010.

#### **Communication:**

The NCOR web site, launched in June, 2005 ([www.ncor.org.uk](http://www.ncor.org.uk)), has been refreshed this year to give the site a more contemporary style. It continues to be populated with information that is useful for both practising osteopaths and osteopathic researchers.

The web site is updated regularly to give current information about conferences, calls for papers for conferences, and conference reports. Information concerning the dates of the research hub meetings and the topic area(s) being discussed or activity undertaken is also posted on the web site. Articles on aspects of research that originally appeared in *The Osteopath* have been progressively placed on the website in PDF form.

*The Osteopath* and *Osteopathy Today* remain a source of communication for those osteopaths who do not have internet access. A series of articles for *The Osteopath* have been prepared by Carol Fawkes throughout the past year concerning various aspects of evidence based practice. The titles, dates and authors of the articles are given below:

Contrast bathing – a brief summary of the evidence. *The Osteopath*. 2008;11(5):16-19

Standardised data collection – potential benefits for osteopathy. *The Osteopath*. 2008;11(6):16-20

Research news in brief. *The Osteopath*. 2009;12(1):17-20

Online resources for research and practice. *The Osteopath*. 2009;12(2):20-23

Viscosupplementation in the treatment of knee joint osteoarthritis – a summary. *The Osteopath*. 2009;12(3):21-24

Audible sounds associated with spinal manipulation – a brief summary of the evidence. *The Osteopath*. 2009;12(4):17-22

**Research Hubs:** The network of research hubs has been active throughout the past year. It has continued to contribute to the development of the standardised data collection and allowed it to be refined before it went on to its third pilot stage involving non-hub members.

Hub meetings are held every 8-10 weeks and details of hub meetings can be found on the web site [www.ncor.org.uk](http://www.ncor.org.uk).

**Oxford Hub:**

This group has met on Wednesday evenings at Oxford Brookes University. The hub has looked at a series of papers relevant to areas of clinical practice under the direction of Mr Jorge Esteves, Senior Lecturer at Oxford Brookes and practising osteopath.

**Leeds Hub:**

This group has met on Tuesday evenings and continues to be hosted by Leeds Metropolitan University. The group has focussed on looking at outcome measures and their application to clinical practice, and clinical audit.

**Exeter Hub:**

This group has met at Peninsula Medical School, Exeter on Saturday mornings. Hub members have also been examining osteopathic literature relevant to clinical practice focussing specifically on low back pain evidence, and the physiological changes occurring as a result of spinal manipulation.

**Bristol Hub:**

Hub members have chosen to examine research looking at the effects of spinal manipulation, the effect of heel height on posture and back pain, and back pain in children.

**Sussex Hub (Haywards Heath):**

This group continues to meet on Sunday mornings and has undertaken a variety of activities at its meetings. Hub meetings have involved looking at outcome measures for use in clinical practice, undertaking clinical audit and looking at literature on low back pain, and the physiological effects of osteopathic interventions.

**Scottish Groups:**

The Glasgow hub met in September to hold a research skills day. The day began with practice on literature searching; two papers had been forwarded to attendees and critical appraisal of the two papers was undertaken. A small amount of time was also spent looking at different research designs and the possible activities the group could engage in by meeting on their own.

At the research strategy day held in July, 2009 it was decided that in future the hubs will have to be more self-facilitating. This will have the twin benefits of releasing the research officer's time for other activities and reduce the cost associated with travel to different hub venues. Travel to hubs will be on an annual basis rather than regularly to each hub meeting. A series of strategies for remote support have been explored. Dr Peter Spencer now leads the Exeter hub meeting and liaises with the research officer prior to the hub meeting to ensure the circulation of resources for the meeting. The Bristol group tries to meet on its own with direction concerning key papers to look at and circulation of areas of research interest and priority within the text of those papers. The Leeds hub now meets at the practice of Chris Huyton in Headingley and Carol Fawkes joins the group via webcam to facilitate the group.

The **Osteopathic Research Governance and Ethics Framework (RGF)** was completed in 2006. The framework has been used in osteopathic educational institutions; a shorter summary has been prepared in a user friendly format for use by practising osteopaths to introduce them to the concept of a RGF. Both documents were updated in July, 2007 and are available on the NCOR website ([www.ncor.org.uk/rgf/index.htm](http://www.ncor.org.uk/rgf/index.htm)). The documents are awaiting further updating to reflect the recent changes in the NHS ethics service and the introduction of the NHS research passport.

**Research Conferences:** The NCOR research conference which took place on 1<sup>st</sup> February, 2008 as part of the three day “Advancing Osteopathy conference” received favourable feedback from attendees. A series of conference meetings have been arranged throughout the past year. Unfortunately due to ill health and re-organisation at Elsevier, the sub-committee who would like to arrange another conference have only met twice. Basic information concerning potential venues, duration of the conference and themes and links with other types of conferences has been considered. The sub-committee is currently trying to arrange another meeting for May 2010.

#### **NCOR Representing Osteopathic Research:**

The National Electronic Library for Health: Complementary and Alternative Medicine section (NeLCAM) was officially launched on 15<sup>th</sup> May, 2006. Carol Fawkes has represented osteopathy as its associate editor since then and has attended some of their occasional board meetings throughout the year. A feature on osteopathy was prepared with the approval of the NCOR stakeholders.

Carol Fawkes has prepared a series of commentaries for the library throughout the past year including studies by:

- Chown M, Whittamore L, Rush B *et al.* A prospective study of patients with chronic back pain randomised to group exercise, physiotherapy or osteopathy. *Physiotherapy*. 2008;94:21-28.
- Mandara A, Fusaro A, Musicco M *et al.* A randomised trial of the effectiveness of osteopathic manipulative treatment of chronic low back pain. *International Journal of Osteopathic Medicine*. 2008, 11:156.
- Thomson O, Haig L, Mansfield L. [The effects of high-velocity low amplitude thrust manipulation and mobilisation techniques on pressure pain threshold in the lumbar spine](#). *International Journal of Osteopathic Medicine*. 2009, 12:56-62.
- Degenhardt BF, Darmani NA, Johnson JC, Towns LC, Rhodes DC, Trinh C, *et al.* Role of osteopathic manipulative treatment in altering pain biomarkers: a pilot study. *The Journal of the American Osteopathic Association*. 2007, 107(9):387-400.
- Williams NH, Hendry M, Lewis R, Russell I, Westmoreland A, Wilkinson C. Psychological response in spinal manipulation (PRISM): a systematic review of psychological outcomes in randomised controlled trials. *Complementary Therapies in Medicine*. 2007, 15(4):271-83.

The library is being increasingly used by all health professions and the current information available is progressively growing. This can be found at [www.library.nhs.uk/cam](http://www.library.nhs.uk/cam). The Complementary and Alternative Medicine specialist collection will be absorbed into NHS Evidence in 2010. The site will then become accessible through <http://www.evidence.nhs.uk>.

### **Development of a Standardised Data Collection Tool for Osteopaths**

The development of a standardised data collection tool has taken place in combination with the development of the hub network. The final version of the tool was created in March 2009 in readiness for its national pilot. All UK osteopaths were invited to be involved in the data collection project which ran from April to July. A total of 1630 completed data sets were received; the enormous task of entering the data has been undertaken by Mrs Shirly Mathias, the NCOR administrator. Mrs Mathias has worked tirelessly with Dr Janine Leach preparing graphical information, and with Carol Fawkes to prepare data for presentation at the GOSc research strategy day in September 2009 and for phased reports submitted to the project steering group and the GOSc. The project is now nearing its conclusion and some interesting findings can be disseminated to profile UK osteopathic practice. The final project report is due for presentation to the General Osteopathic Council by the middle of April, a lay summary for patients, and a practitioners' report will be prepared and uploaded onto the web site. A paper describing the tool development will also be prepared for publication during 2010.

### **Other activities**

The publication of guidelines on the early management of persistent non-specific low back pain by the National Institute for Health and Clinical Excellence was a welcome contribution to practice during 2009 (<http://www.nice.org.uk/CG88>). NCOR members and their colleagues within the OEIs contributed feedback on several draft publications associated with the process throughout the year. The feedback was then submitted to NICE at time points throughout the year.

Clinical audit is a topic of growing interest to the profession. The creation of a clinical audit handbook aimed specifically at osteopaths in private practice is in preparation and will be completed in the spring of 2010.

**Future Work:** A good deal of the groundwork in terms of strategic planning has been completed by NCOR during the past six years. The demands on NCOR and its stakeholders continue to grow and the expectations of the profession remain high. A new strategy for the period 2008 to 2012 was prepared; changes within the constitution of the GOSc meant that a one year plan was prepared for consideration for 2009/10 and this will be repeated in 2010/2011. Funding priorities remain in terms of maintaining the infrastructure already developed and a series of new priorities are being identified to support osteopathy in the future as a maturing profession. Political developments continue to impact on the wider healthcare arena and osteopathy must be responsive to such developments. Inevitably there are far more items in strategic development to be accomplished for osteopathy than time, manpower and financial resources allow: a number of key areas will be focussed upon by NCOR to benefit all stakeholders in osteopathy.

**Professor Ann Moore**

**Carol Fawkes**

**Mrs Shirly Mathias**

**Liz Lance**

# **Research Reports from the Osteopathic Educational Institutions in the United Kingdom.**

*The reports are printed in alphabetical order in the format and font supplied by each individual institution.*

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# Research

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# Annual Report

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# 2008/9

BRITISH COLLEGE OF  
**BCOM**  
OSTEOPATHIC MEDICINE



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## **OVERVIEW OF RESEARCH AT BCOM**

The purpose of this report is to give an overview of research activity at BCOM, both by staff and students, and to demonstrate how BCOM engages with the wider research community. The primary contributor to this report is the Head of Research.

BCOM's involvement in research is central to its educational activities. As part of its commitment to research, BCOM founded the International Conference on Advances in Osteopathic Research (ICAOR). The Masters in Osteopathy, first delivered during 2008/9, replaced BCOM's traditional Dissertation with a shorter, publication-ready research paper, enhancing the role of research in the development of new generations of osteopaths. BCOM is also actively involved in the staff development of its own faculty to encourage research, particularly among osteopaths, with a number of College staff having been, or being, supported in masters- and PhD-level work.

BCOM's commitment to Osteopathic research is further strengthened by collaborations with osteopathic and non-osteopathic institutions. For a number of projects these continue to be maintained with the MRC Nutrition group at The Institute of Child Health (ICH) in London, at Napier University, University College London (UCL) and Queen Mary's University of London Neuroscience and Neurosurgery department at the Institute of cellular and molecular Science. Collaboration between the Heads of Research from the Osteopathic HEIs is ongoing and it is hoped that a partnership project will commence in the next academic year.

## **THE RESEARCH DEPARTMENT**

The four main priorities of the Research Department are:

- To gain external funding for institutional research programmes.
- To enhance the profile of the International Conference on Advances in Osteopathic Research (ICAOR).
- To promote collaborative research.
- To increase the proportion of BCOM staff engaged in published research.

The Head of Research is Dr Heather Hinkley, who in collaboration with key academic staff, directs the research priorities and planning of the institution, as well as being the administrative and teaching leader for student research.

Other leading researcher and research interests include:

Anatomy dissection: Dr A Saaid/Dr IP Drysdale

Bone Health: Dr H Hinkley/Mrs Daphne Bird/Dr IP Drysdale/Mr M Hines

Clinic data analysis: Dr IP Drysdale/Dr H Hinkley

Omega-3 polyunsaturated fatty acid supplementation: Dr Simon Dyall

Neuroprotection and neuroplasticity: Dr Simon Dyall

Asthma: Mr Ross Johnston

Osteopathic surveys: Dr IP Drysdale/Dr H Hinkley

Biomechanics and exercise physiology: Mr M Hines

BCOM has three constituted meetings that are primarily concerned with research.

### **Research Committee**

Membership: Head of Research, Principal, Senior Research Active Staff.

Meets minimum three times per year

### **Research Ethics Committee**

Membership: Head of Research, Principal, co-opted members (minimum of two, maximum of four), at least two of whom shall have qualifications in Osteopathy and/or clinical practice, Board of Governors representative, lay representative. Meets a minimum of twice per year

### **Dissertation Committee**

Finalises third-year title allocations and reviews final research paper marks. Meets twice a year.

The Research team is represented on all major academic and learning resources meetings.

## **BCOM AND THE OSTEOPATHIC RESEARCH COMMUNITY**

### **NATIONAL COUNCIL OF OSTEOPATHIC RESEARCH (NCOR)**

BCOM is a stakeholder in this organisation, which has been set up to act as a unifying body for those parties engaged in Osteopathic research in the UK. Representatives from the Osteopathic Institutions, General Osteopathic Council and British Osteopathic Association are included on the Council. Meetings are held every two months at Osteopathy House. The Head of Research attends these meetings in addition to the following:

- Strategic planning day in Eastbourne in July 2009.
- Research Governance Committee to review proposals submitted for grants.
- Heads of Research group

### **Heads of Research Group (NCOR)**

The Head of Research is actively involved with NCOR's Heads of Research Group. Although this group was not active during 2008/9, it is intended to meet during 2009/10. This group hope to discuss a possible collaborative Delphi project and use of the NCOR Standardised data collection form in the OEI clinics.

### **INTERNATIONAL CONFERENCE ON ADVANCES IN OSTEOPATHIC RESEARCH (ICAOR)**

**ICAOR 8** will be hosted at ICOM in Milan on 23<sup>rd</sup> to 25<sup>th</sup> April 2010. At time of writing, BCOM staff involvement is still under discussion.

### **EXTERNAL RESEARCH MEETINGS/TRAINING/CONFERENCES ATTENDED BY FACULTY DURING 2008/9**

- ICAOR7, Florida, September 2008
- American College of Sports Medicine (ACSM) 56<sup>th</sup> annual meeting, Seattle, May 27-30 2009
- National Osteoporosis Society conference, Manchester, June 2009
- Society Sports Therapists 1<sup>st</sup> annual conference , London Metropolitan University, June 10<sup>th</sup>-11<sup>th</sup> 2009
- NCOR Strategic planning meeting. Eastbourne, July 9<sup>th</sup> 2009.

## **STAFF RESEARCH ACTIVITY**

BCOM has continued to look at new collaborations and opportunities, including funding, to further enhance its research profile within the osteopathic sector. One such new collaboration is between Dr Dyall and Efamol, who are supporting a study into the effects of omega-3 fatty acid supplementation on movement disorders in children, outlined below. During 2008/9, attempts to extend funding from non-osteopathic sources were unsuccessful, but the team will continue to attempt to build new relationships in 2009/10 and beyond as part of the ongoing institutional strategy to build new funding sources.

## **ONGOING STAFF PROJECTS**

### **Fibre Composition Of The Hypoglossal Nerve And Its Relation To The Development Of Speech**

Lead: Dr Arjmand Saaid with Professor C Dean, University College London (UCL)

This is a comparative study, based on counting nerve fibres forming the hypoglossal nerve, taken from human cadavers at the UCL dissection room, comparing the average number with the fibre composition of hypoglossal nerves of non-human primates. So far, 30 human hypoglossal nerves have been dissected. All nerve specimens are sent for histological processing, using various histological stains, digitally photographed and counted using special software at UCL laboratories. Samples of hypoglossal nerves are currently being taken from apes.

### **Analysis Of BCOM Clinic Data**

Lead: Dr H Hinkley

Since October 2003, patient data has been entered onto a computer database, called DataEase. Students and staff use this resource for research. As part of their course work for the Practice management module, fourth year students now undertake their own mini audit of all patients attending for a consultation in their third and fourth year. This project also functions as a broad-based audit exercise, and will consider issues such as pain sites, gender and age.

### **The Sailors of the Mary Rose**

Lead: Mr Mark Hines

In 1982 the wreck of the Mary Rose was raised from the Solent. Following initial work by Ann Stirland, which included assigning the skeletal remains to individuals, an opportunity arose to fully assess and catalogue the bones. The Mary Rose was the first ship to use broadside cannons, and as she led Henry VIII's ships towards the French forces in the Battle of the Solent, a sharp turn in heavy winds caused her to capsize. There were over 400 sailors onboard, and an unknown number of officers, and of those, the skeletons of 92 were preserved in the hull of the ship and have been retrieved.

This is a unique collection, as it comprises so many young, active, and healthy men, who died from a known non-disease-related cause. During a visit to the site at the end of August 2009, a comprehensive assessment was made of long-bone and

cranial measurements. Further visits will be to generate research into a number of interesting case studies, and peculiarities of vertebral anatomy across the population, including facet-modelling and unusually high frequencies of fifth-lumbar vertebra sacralisation, coccyx sacralisation, and a lack of lumbar lordosis. Research into this collection will continue through the remainder of 2009 and into 2010.

### **Comparison of VO<sub>2</sub> max, bone mineral density, body composition and ankle stability between ultra-endurance runners, marathon runners, and non-athletes**

Lead: Mr Mark Hines and Dr Simon Dyall

Whilst there is a growing body of literature on physiological adaptations to running, attention on ultra-endurance runners is lacking. Whereas a marathon runner will train to complete a single 26.2-mile run, an ultra-endurance runner will train to be able to complete greater distances and on consecutive days. Because of their different training goals and strategies, and the increased level of fitness required for successful completion of ultra-endurance events, we are investigating a number of areas related to the health and fitness of these athletes.

The VO<sub>2</sub> max test is the benchmark of aerobic fitness, but assessment of the values obtained is usually only compared to world-class marathon runners. It is possible that even amateur ultra-endurance athletes have aerobic capacities in excess of those of professional marathoners, and this research intends to investigate this.

Body composition will involve a comparison of methods between skinfold callipers and the Bod Pod. Ankle stability will be assessed, as long-distance, off-road runners may have less static stability than road-runners and non-athletes. This is because off-road terrains require the ankle to move through high ranges of motion and at speed, and they may therefore become less able to hold any one position well. A concern with ultra-endurance athletes is that the high levels of impact, without sufficient time to recover, may lead to a decreased ankle bone mineral density, and consequently an increased risk of stress fractures during activity. Subjects for the study will be recruited via charities and racing websites. There is already a growing demand for these tests by the ultra-endurance athletes already contacted. The provisional cut-off for assessments is October 2010, as this ties-in with an ultra-endurance race at that time, for which it is expected that more athletes will want to be involved in the research.

### **Bone Health Of Vegans**

Lead: Dr H Hinkley

A major collaboration initiated with Dr Margaret Ritchie from Napier University is ongoing, regarding analysis of vegan specific food frequency questionnaires (FFQ). It is intended to submit an abstract of this data to ASBMR in 2010. Representatives attended the Bristol vegan fare in June 2009 for the fourth consecutive year to continue to collect BUA and questionnaire data. Eighty vegans were scanned, focusing on subjects who had recently become vegan or are life-long vegans and are being followed up yearly. An EPIC physical activity questionnaire was completed by this cohort as was a bone specific physical activity questionnaire. An abstract resulted from this and will be presented at ASBMR September 2009:

Hinkley HJ, Dyall SC., Bird D, Drysdale. Physical activities with ground impact may benefit the bone health of vegans. Proceedings of American Society for Bone Mineral Research, 31st Annual Meeting 2009, USA.

### **Fracture Risk Prediction**

Lead: Dr H Hinkley and Daphne Bird

Questionnaires are being distributed to 1125 subjects who attended the BCOM Ultrasound fracture risk assessment clinic from 1998 to end 2000, to determine accuracy of fracture prediction. Two abstracts on 100 Caucasian females have resulted so far from this study and are being presented at ASBMR September 2009: Hinkley HJ, Bird D, Drysdale IP. Preliminary comparison of QUS and FRAX (excluding BMD) screening tool for estimating long-term fracture risk in women. Proceedings of American Society for Bone Mineral Research, 31st Annual Meeting 2009, USA.

Hinkley HJ, Bird D, Drysdale IP Accurate evaluation of long-term fracture predictability may be confounded by interim risk reduction interventions adopted in response to information obtained during the fracture risk assessment. Proceedings of American Society for Bone Mineral Research, 31st Annual Meeting 2009, USA.

At the time of writing a total of 135 subjects have provided follow up information.

### **POsTE (Patients Osteopathic Experiences) Study**

Lead: Dr I P Drysdale and Dr H Hinkley

This survey aims to produce an account of patients' experiences of osteopathy. Results will inform osteopaths to aid their understanding of the expectations of their patients; provide future patients with information; inform osteopathic training and identify future research priorities.

The study commenced in October 2008 and was advertised through a number of national media. Patients either completed an online questionnaire or requested a postal version. Data for 769 respondents is currently being analysed.

## **NEW PROJECTS**

### **The effects of omega-3 fatty acid supplementation on movement disorders in children**

Lead Dr S Dyll

In collaboration with Efamol, we aim to investigate the effects of chronic dietary supplementation with the long chain omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) on movement disorders in children with developmental coordination disorders. There is preliminary evidence of beneficial effects with omega-3 fatty acid supplementation on movement skills in children with dyspraxia and Attention Deficit Hyperactivity Disorder (ADHD). However, in these studies, movement was assessed by the ABC Movement Assessment Battery for Children and we aim to further these studies by using more sensitive indices of performance. Analysis will involve both static and dynamic balance via the RS Scan footplate and muscle activity via Electromyography (EMG). The protocol will also involve an initial blood fatty acid compositional analysis to establish baseline values and a post-study analysis to confirm incorporation/rectification. The study will be a randomised double-blind placebo controlled trial and will run for 12 to 16 weeks (depending on term time). We aim for a minimum of 20 subjects per group.  
Start date: October 2009

### **Validation Of The Vegan Specific Food Frequency Questionnaire**

Lead: Dr H Hinkley

In collaboration with Dr Ritchie. External funding is being sought for this.

## **STUDENT RESEARCH ACTIVITY**

### **UNDERGRADUATE RESEARCH**

This year laboratory notebooks were introduced for completion by third and fourth year students to provide an ongoing log of activity related to their research project. These are submitted by students with the final research paper. 44 fourth year students submitted research papers. 8% of students attained an A grade; 44% B; 44% C; 4% were referred. (The research paper is at M level so the pass mark is 50%.)

The Research Department, in liaison with other departments, was careful to monitor the uplift to universal M level arising from the introduction of the Masters in Osteopathy. Internal markers and external examiners commented very positively on the standard of the research presented by the first completing year of the M.Ost, which was also the first time the journal-ready research paper was presented. There was no decrease in standards and the Department believes that both staff and students delivered strongly on the challenge of the new degree and M-level research paper.

1. Survey on the identification of hypermobility syndrome by osteopaths in the UK
2. The innervation of iliolumbar ligament: a historical investigation
3. A study comparing the effects of Buteyko breathing exercises and osteopathic spinal mobilisation techniques on lung function
4. A comparison of the effects of static stretching versus dynamic stretching on hamstring endurance
5. The effect of lumbar spine high-velocity low amplitude thrust technique on pressure pain threshold in rectus femoris muscle
6. The effects of suboccipital muscles met and c1/c2 HVLAT on pressure pain threshold of the scalp
7. A comparison of the incidence of lower back pain in wing chun and Brazilian jiu-jitsu practitioners
8. The effect of muscle energy technique (MET) on pelvic alignment in relation to plantar pressure pattern and distribution
9. The effect of cold dermatomal hydrotherapy on lumbar spine pressure pain threshold
10. The effects of backrest and footrest angle on lumbar erector spinae surface electromyography
11. The relationship between foot displacement angle and foot arch
12. The effects of mobilisations and steam inhalations on lung function among an asymptomatic population
13. Osteopathic intervention to the diaphragm and the change in venous return from the lower limb
14. The effects of neuromuscular technique on the posterior compartment of the legs on standing balance
15. Comparison of cervical C2-3 manipulation and TMJ muscle energy techniques on deltoid isometric abduction strength
16. The effects of verbal instruction on spinal stability, as measured by the muscle activity of multifidus and iliocostalis lumborum

17. The immediate effects of bilateral rib mobilization on cervical active range of motion
18. An investigation into changes in the angle of lordosis and functional changes that occur in the lumbar spine of dancers
19. The effect of lumbar spine high velocity low amplitude thrust and muscle energy technique on the range of motion of the lumbar spine
20. The effects of dextrose on pressure-pain threshold in adults
21. The comparison of the effect of cervical upper complex mobilisation and sub occipital muscle group met as two isolated interventions on standing balance in asymptomatic subjects
22. A validation study into the use of electromyography (EMG) and foot plate to assess static balance in dyslexic subjects versus non-dyslexic subjects in BCOM student population
23. The effects of a bilateral cervical and lumbar high velocity low amplitude thrust on venous return in the lower limb
24. The change in perceptions towards osteopaths and osteopathic medicine amongst medical students and general practitioners since 1998
25. The immediate effect of high velocity low amplitude thrust versus lateral glide mobilisation in the cervical spine, on range of motion in side bend and rotation
26. The osteopathic significance of the temporomandibular joint in patients presenting with chronic shoulder pain
27. A comparison of the effects of upper and mid cervical manipulation on standing balance
28. The effect of root of the small bowel mesentery mobilisation on lumbar flexion and lateral flexion
29. Awareness of osteopathy in the young around the world
30. A survey of clinical approaches used by UK osteopaths in the management of paediatric asthma
31. The effects of muscle energy techniques on the temporomandibular joint on cervical range of movement
32. The effect of muscle energy techniques and contrast hydrotherapy on vital capacity
33. Can the Bod Pod detect changes in body volume with intake of water?
34. A comparison of mouth and nose breathing with distraction upon pain pressure threshold perception in asymptomatic subjects
35. A study to investigate the effects of psyching up versus visualisation techniques when practised short term and long term on maximum wrist grip muscle strength
36. An investigation into the effect of unilateral cervicothoracic junction HVLAT on motor nerve conduction velocity (NCV) of the ulnar nerve
37. A study of temporomandibular joint mobility (TMJ) on eight pressure areas of the foot
38. Does muscle energy technique (MET) of the temporomandibular joint (TMJ) affect balance?
39. A comparison of selected hot and cold timing hydrotherapy regimes applied to the lumbar sympathetic outflow levels and their effects on the cutaneous blood flow to the legs
40. Establishing a link between hand dominance and cranial, cervical spine and upper limb pathology related to structural change
41. The effects of salabhasana, a yoga posture, on the local circulation of the upper limb: a pilot study

42. A survey of golfing injuries
43. A study comparing the effect of met against the effect of met with motor imagery on the range of movement of the lumbar spine
44. A study into the acute effects of warm-up protocols: comparing between dynamic warm-up, static stretching, and no stretching on dominant hip flexor muscles isometric peak force

Five students (titles 1,2,9,16,42) submitted research abstracts to the Chiropractic, Osteopathy and Physiotherapy student conference to be held at BSO on 21<sup>st</sup> November 2009.

## **STAFF POSTGRADUATE ACTIVITY**

The following staff postgraduate activity was supported by the College, for example, by use of SDAC funding.

### **Masters Level**

2007-9

#### **MSc Sports And Exercise Rehabilitation**

St Mary's University College, Twickenham

2008-9

#### **MSc Clinical Neuroscience**

Institute of Neurology, University of London

2008-10

#### **MSc Sports And Exercise Rehabilitation**

St Mary's University College, London

### **PhD Level**

2004-2011 with the University of Westminster

#### **Visceral Osteopathy and Autism**

## **ABSTRACTS PRESENTED AT CONFERENCES**

### **Chiropractic, Osteopathy and Physiotherapy conference AECC Bournemouth 25<sup>th</sup> October 2008**

#### **An investigation into the effect of contrast hydrotherapy applied to the lumbar sympathetic outflow levels on the cutaneous blood flow to the lower legs.**

Stileman R.

#### **Background**

Hydrotherapy is the use of hot and cold water in any of its three forms in the treatment of disease. Hydrotherapy can be equated with thermotherapy in that it is a stimulus that withdraws or adds heat to the body to have a therapeutic effect. One method of application involves the alternate application of hot and cold packs in the form of contrast hydrotherapy. This is reported to result in an increase in blood flow. However hydrotherapy can also influence the autonomic sympathetic spinal cord reflex and produce its effects at a remote distance from the site of application via this consensual reflex response. Using these two methods of manipulating the circulation the aim of this investigation was to measure the effect that the application of contrast therapy over the lumbar sympathetic outflow levels of T10-L3 had on the cutaneous blood flow to the lower limbs. This was measure by the Laser Doppler which provides an arbitrary measure of blood perfusion

#### **Method**

20 non-smoking male BCOM students participated in the investigation. The contrast hydrotherapy regime involved an alternating cycle of 3 minutes warm followed by 1 minute cold which was repeated a total of three times. This was applied over the lumbar spinal areas between T10 and L3. Blood flow was measured by a Laser Doppler probe attached to the dorsum of the right and left foot. Blood flow was measured as during a 12-minute baseline period, during the 12 minute hydrotherapy application and for 12 minutes after the hydrotherapy.

#### **Results**

The results were statistically analysed using a two-tailed repeated measures ANOVA at a 95% level of significance ( $p < 0.05$ ) The results indicated that there was no significant difference in blood flow to the fight foot ( $p = 0.3903$ ) and no significant difference in blood flow to the left foot ( $p = 0.4917$ )

#### **Conclusion**

These results suggested that the application of contrast therapy to the lumbar outflow levels may not be a sufficient enough stimulus to increase the blood supply to the lower limbs by this consensual sympathetic autonomic reflex pathway. However some observable trends could be demonstrated from the data suggesting that further research needs to further investigate the underlying nature of this reflex mechanism.

## SUBMISSIONS TO PERIODICALS

### **Unusual bilateral termination of the cephalic vein**

Saaid A. MD, PhD and Drysdale I. PhD. *Clinical Anatomy* 2008;21(8):786-7.

**Aim:** Identification of unusual bilateral termination of the cephalic vein in cadaver.

**Method:** Dissection. During routine dissection of an eighty nine year old male cadaver the upper limb dissection was completed up to the shoulder region. On both sides, the normal expected cephalic vein termination was not visible, further dissection was necessary by removing part of the clavicle to trace the path of the vein.

**Results:** Right side: the termination was found to be into the right internal jugular vein just above its union with right subclavian vein, the vein was considerably dilated at the point of termination. Left side: The course of the vein was different from right side of the same cadaver and from normal termination, the vein continued its course in Deltpectoral groove toward the lower anterior Border and in close proximity to the clavicle, then turned medially crossing the mid point of the clavicle becoming hidden by passing deep to the clavicle and ending in the subclavian vein. This course was different from course of vein terminating in subclavian vein previously reported.

**Conclusion:** The presented anatomical findings could be of considerable interest to clinicians who would normally expect to find the termination in the axillary vein. Right side termination at internal Jugular vein is interesting since an introduced intravenous line or catheter could move in wrong direction.

The left sided variation running close to clavicle could be damaged in clavicular fracture. This variation on the left side could be due to enlargement of one of the medial branch of cephalic vein. The idea, therefore, of lateral traction of the vein in the anterior approach to access shoulder.

Joint surgery should be reconsidered to avoid damage to the vein, finally the venous drainage of the upper limb and other possible venous variation in this cadaver should also be considered.

### **Omega-3 polyunsaturated fatty acids increase the neurite outgrowth of sensory neurones in adult and aged rats**

Robson, L.G., Dyll, S.C., Sidloff, D. & Michael-Titus, A.T. *Neurobiology of Ageing* in press

Polyunsaturated fatty acids (PUFA) of the omega-3 series and omega-6 series modulate neurite outgrowth in immature neurones. However, it has not been determined if their neurotrophic effects persist in adult and aged tissue. We prepared cultures of primary sensory neurones from male and female rat dorsal root ganglia (DRG), isolated at different ages: post-natal day 3 (P3) and day 9 (P9), adult (2–4 months) and aged (18–20 months). Cultures were incubated with the omega-6 PUFA arachidonic acid (AA) and the omega-3 PUFA eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), at 0.8, 4, 8 and 40  $\mu\text{M}$ . PUFA increased neurite outgrowth throughout the developmental stages studied. The effects of omega-3 PUFA, in particular DHA, were still prominent in aged tissue. The amplitude of the effects was comparable to that of nerve growth factor (NGF; 50 ng/ml) and all-*trans*-retinoic acid (ATRA; 0.1  $\mu\text{M}$ ). The effects of PUFA were similar in cells positive or negative for the N52 neurofilament marker. Our results show that omega-3 PUFA have a marked neurite-promoting potential in neurones from adult and aged animals.

**The effects of high-velocity low-amplitude thrust manipulation and mobilisation techniques on pressure pain threshold in the lumbar spine.** Thomson O, Haig L, Mansfield H. *Int J Osteopath Med.* 2009; 12: 56–62

**Objective:** To compare changes in pressure pain threshold (PPT) following spinal high-velocity low-amplitude manipulation (HVLAT) and spinal mobilisation.

**Design:** Fifty asymptomatic subjects (mean age 27 (6) years; 29 males and 21 females) volunteered to participate in a randomised controlled, singled blinded design study. Subjects were screened for suitability and were randomly allocated into one of three intervention groups where they received either a unilateral spinal HVLAT, or a spinal mobilisation to the lumbar spine or a sham 'laser' procedure (control). PPT measurements were made immediately pre and post intervention, using a hand-held algometer which was positioned directly over the lumbar spinous process. A two-way ANOVA with repeated measures was conducted to determine PPT changes between groups. The statistical significance was set at the 0.05 level.

**Results:** There were no significant differences in PPT across time for each of the groups ( $P=0.584$ ). The mobilisation group displayed a small increase, though not significant change in mean pressure pain threshold ( $0.434(0.55)$  Kg/cm<sup>2</sup>), although effect size was considered to be large ( $ES = 0.78$ ). The HVLAT group demonstrated a decrease in mean PPT ( $-0.173(0.48)$ ) ( $ES = 0.36$ , small), and a smaller decrease was noted for the control group ( $0.105(0.425)$  kg/cm<sup>2</sup>) ( $ES = 0.25$ , small).

**Conclusion:** Neither spinal HVLAT manipulation or mobilisation had a significant effect on PPT of the lumbar spine in asymptomatic subjects. Only spinal mobilisation appeared to have a greater mean increase in PPT and effect size than the control group. Further investigation into the hypoalgesic effects of these techniques on symptomatic subjects is suggested.

**Cardiovascular disease and depression, are omega-3 fatty acids the missing link?** Dyall, S.C. Submitted to *Journal of Psychosomatic Medicine*

The association between cardiovascular disease and depression is well established. There is a high prevalence of comorbid psychiatric disorders with cardiovascular conditions. For example, emotional distress and depression have recently been identified as independent risk factors for coronary artery disease. However, our understanding of the nature of this relationship is limited and these conditions are typically viewed and treated in isolation.

There is increasing evidence that omega-3 fatty acids are able to modulate cardiovascular and neurological activity on a number of levels, operating through a multitude of overlapping mechanisms. For example, low tissue levels of omega-3 fatty acids are associated with both cardiovascular disease and depression. The omega-3 fatty acids, eicosapentaenoic acid and docosahexaenoic have been shown to influence cellular function through direct effects on membrane biophysical properties, and also by providing a precursor pool for signalling molecules and lipid-derived mediators. Determining the optimal omega-3 fatty acid levels, and potentially more importantly the optimal omega-6:omega-3 ratio may ultimately provide a modifiable therapeutic link between these apparently disparate pathologies. This

review summarises the role of omega-3 fatty acids in cardiovascular disease and depression, and by examining their potential mechanisms provides a rationale for their therapeutic application.

### **Omega-3 fatty acids reverse age-related decreases in nuclear receptors and increase neurogenesis in old rats**

Dyall, S.C., Michael, G.J., & Michael-Titus, A.T. Submitted Journal of Neuroscience Research

Retinoic acid receptors, retinoid X receptors and peroxisome proliferator-activated receptors are transcription factors involved in many cellular processes including learning and memory. The mRNA levels of retinoic acid receptors and retinoid X receptors decline with ageing, and this decrease can be reversed by treatment with retinoic acid. Furthermore, this treatment also alleviates age-related memory deficits. The omega-3 polyunsaturated fatty acids eicosapentaenoic acid and docosahexaenoic acid have neuroprotective effects in the aged brain, and they are endogenous ligands of retinoid X receptors and peroxisome proliferator-activated receptors. We investigated whether dietary supplementation with eicosapentaenoic acid and docosahexaenoic acid reverses the age-related decline in protein levels of retinoic acid receptors, retinoid X receptors and peroxisome proliferator-activated receptors in rat forebrain.

The study compared adult and old (3-4 and 24-26 month) rats, and the latter were fed a standard diet or a diet supplemented for 12 weeks with eicosapentaenoic acid and docosahexaenoic acid at 270 mg/kg/day (eicosapentaenoic acid: docosahexaenoic acid ratio of 1.5:1). With ageing significant decreases in the protein levels of retinoic acid receptor- $\alpha$  (18%), retinoid X receptor- $\alpha$  (36%), retinoid X receptor- $\beta$  (50%) and peroxisome proliferator-activated receptor- $\gamma$  (40%) were seen vs. adult rats, which were reversed by omega-3 polyunsaturated fatty acid supplementation. The treatment also alleviated the significant age-related decrease in neurogenesis in the hippocampus. These observations illustrate additional mechanisms which may underlie the neuroprotective effects of omega-3 polyunsaturated fatty acids in ageing.

### **REVIEW OF MANUSCRIPTS**

Manuscripts have been reviewed for **Surgical and Radiologic Anatomy and Journal of Bodywork and Movement Therapies.**

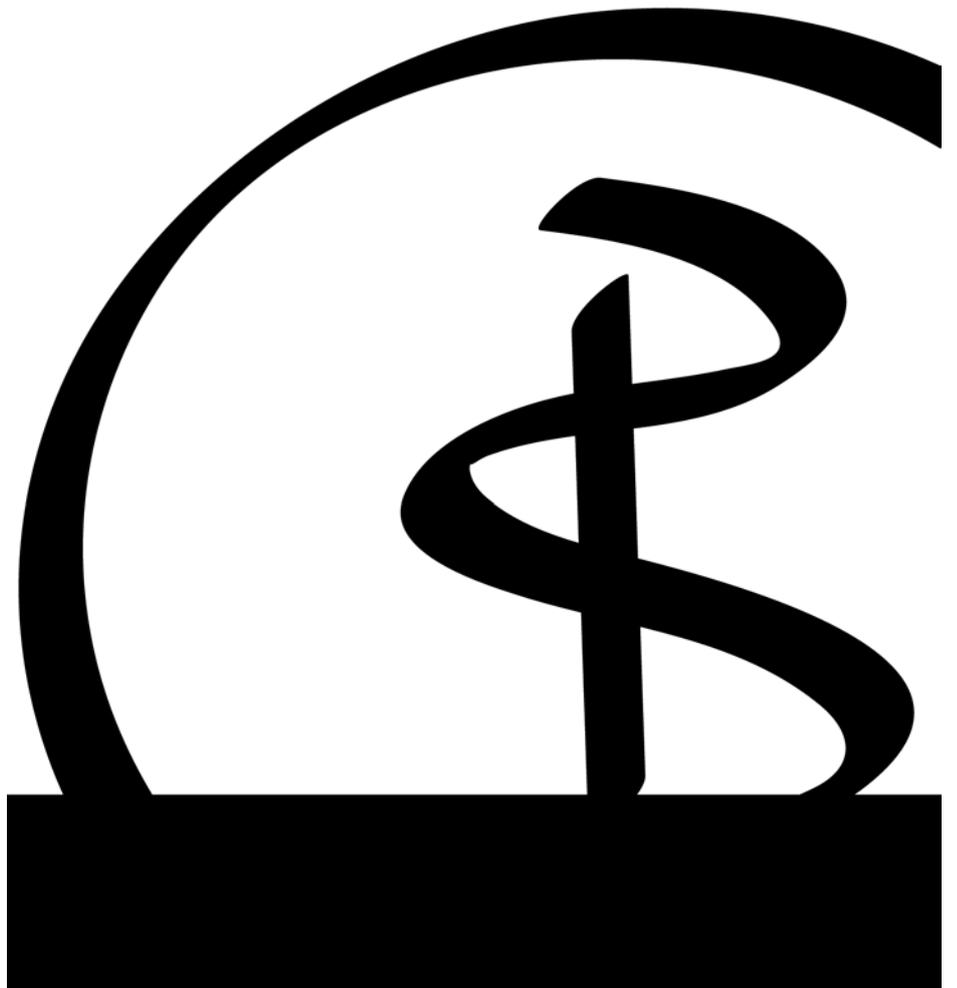
## **CRITICAL REVIEW**

BCOM continues to highlight research as one of its primary educational and institutional commitments and focuses on it both in its admissions work and in its syllabus. 2008/9 saw the successful introduction of the M.Ost research paper. A number of interesting research projects are ongoing and have been initiated, reflecting an increase in the number of research-focused staff at BCOM during the year. Three of the four main priorities of the Research department: to promote collaborative research; to increase the number of staff engaged in research and to enhance the profile of ICAOR, have been addressed this year. Existing collaborations are ongoing and being strengthened; more staff this year have engaged in research activities, including masters degrees, research publications and presentations at conferences; ICAOR 8 will be held in Milan in April 2010. A collaboration with Professor Lee at Roehampton University, initiated in 2008, is now proceeding. The Department will continue to seek interesting research opportunities within the institution and with its peers in the osteopathic sector. The fourth priority, to gain external funding, has not been successful this year but will be prioritised for the next academic year, as will the collaboration between the Heads of Research from the Osteopathic HEIs. This group was initiated by BCOM in 2006 and has fostered positive communication but so far no collaborative project has ensued.



THE BRITISH SCHOOL OF OSTEOPATHY

# Research and Scholarship Report 2008-2009



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# Introduction

## ***Report from Vice Principal (Research and Quality)***

The School has continued to promote and develop research activity at faculty and student levels. Several members of staff have had work published in peer reviewed journals for the first time and student research has continued to be produced at a high standard.

We have commenced a large funded study "Investigating osteopath's attitudes to managing and assessing risk in clinical settings and adult patients' experiences and responses to osteopathic treatment". The project has been funded by the General Osteopathic Council and the award is being managed by the National Council for Osteopathic Research. We have appointed a full time Research fellow to work on the project and acquired optical data capture software and hardware to enable the efficient processing of survey data. This project strengthens existing collaborations with co-applicants from Barts and The London, School of Medicine and Dentistry, Royal Holloway, University of London and Warwick Medical School.

Collaboration with other institutions is a key method to develop the School's research capability and track record. Notably we now have a member of faculty acting as an external collaborator on a NHS National Institute for Health Research program grant held at the Research Institute of Primary Care and Health Sciences, Keele University. He has also been contributing to an Arthritis Research Campaign clinical studies group.

The research team continues to produce the four times yearly Research and Treatment Bulletin (RTB), reviewing and summarising selected recent research relevant to osteopathic practice. Originally for faculty, it has found a wider audience and is now an integral part of the International Journal of Osteopathic Medicine (IJOM), published by Elsevier. Faculty are actively recruited to contribute to this and papers are suggested that relate to their areas of teaching practice. This process is used as an opportunity for staff to develop their academic writing skills. Seventeen contributions were published from our staff over the year and five submissions came from members of staff who have not previously submitted work for publication.

The Chiropractic, Osteopathy and Physiotherapy conference has again been run in collaboration with colleagues from the Anglo European College of Chiropractic. It offers new graduates and students the opportunity to present research findings completed as part of programmes of study. The conference now attracts abstract submissions from a large range of institutions and has begun to have contributions from colleagues internationally. Seven of our recent students presented at the conference in 2008. The School hosted the 2009 conference.

Over the coming year we will be building on survey work carried out in our clinic and aim to implement routine data collection and clinical audit. We plan to enhance our research teaching and to offer more opportunities for faculty and students to develop work to a standard suitable for publication.



Steven Vogel  
Vice Principal (Research and Quality)

## Scholarship

The Research Informed Teaching Award from the University of Bedfordshire has been completed successfully and has allowed us to schedule journal clubs into staff and student timetables as well as complete primary research about osteopaths' attitudes to returning patients with low back pain to work. We are planning to continue running journal clubs over the coming year and will be widening the topic areas selected. The project has contributed to a clearer view of the role of evidence based guidelines within teaching and clinical activities. Drawing on this experience, we plan to place more emphasis in the coming year on integrating evidence based guidelines into clinical learning. These plans have been enhanced by the participation of a member of faculty on a National Institute for Health and Clinical Excellence (NICE) clinical guidelines development group. The guideline for the early management of persistent non specific back pain has been published. It enabled us to gain experience contributing to reviewing evidence, drafting recommendations, implementation and costing information as well presenting widely to the media and health professionals. We have run several strategic planning meetings to discuss the closer integration of evidence based practice in clinical education.

Reflective practice and peer review are key activities associated with scholarship and the School has begun piloting 360 appraisals and integrating existing peer observation of teaching practice into the appraisal process. In addition we have started to use peer appraisal with our unit evaluation process as well as the usual annual reporting to the University of Bedfordshire.

Staff and faculty had the opportunity to share practice and current developments at our annual faculty weekend. Keynotes examined professionalism and appraised underlying osteopathic theory. Workshops covered a range of topics from issues related to osteopathic practice to developing better educational delivery. Our staff development days also supported development of good practice with a focus on assessment, research supervision and clinical teaching.

Many of our staff share their expertise with other institutions in the UK and in Europe and in turn bring insights and practice from other institutions back to the BSO. Faculty examine student research and teach osteopathic practical skills as well as academic subjects. Some provide peer review of journal manuscripts and grant applications as well as contribute to specialist think tanks and policy groups.

## Academic and Research Links With Other Organisations

The BSO is an accredited partner of the University of Bedfordshire. In addition to the delivery and approval of programmes of study members of the BSO faculty sit on University of Bedfordshire committees, including the Academic Board and the Teaching Quality Standards Committee.

Memoranda of understanding have been established with London Southbank University and the A T Still University, Kirksville, USA. These collaborations aim to enhance education, scholarship and research.

The Arthritis Research Campaign has used a member of faculty to take part in its Clinical Studies Group.

The National Institute for Health and Clinical Excellence has used a member of faculty on one of its guideline development groups.

The School has active research collaborations with the following universities and departments:

- Arthritis Research Campaign  
National Primary Care Centre,

Primary Care Sciences, Keele University.

- Department of Psychology, Royal Holloway, University of London.
- Health Sciences Research Institute, University of Warwick.
- Institute for Musculoskeletal Research and Clinical Implementation, Anglo-European College of Chiropractic.

- Institute of Health Sciences Education, Barts and The London, University of London.

The School has formal links with L'Institut Supérieur d'Ostéopathie de Lyon, France and the Osteopathie Akademie Munchen, Munich, Germany. We contribute to the delivery of some practical osteopathic skills lecturing and some consultancy on course development.

### **Current Research**

London, S. and Vogel S. Satisfaction and quality of services study. We have carried out a cross sectional survey of patients' experiences of the School's Clinic using an amended version of the General Practice Assessment Questionnaire.

Hay, E. et al Optimal Management of spinal pain and sciatica in primary care. Steven Vogel is an external collaborator on this National Institute for Health Programme Grant which is held by the Primary Care Musculoskeletal Research Centre, University of Keele.

Vogel, S., Mars, T., Pincus, T., Eldridge, S., Underwood, M. Investigating osteopath's attitudes to managing and assessing risk in clinical settings and adult patients' experiences and responses to osteopathic treatment. This mixed methods study involves practitioner and patient surveys with a series of interviews which will contribute to interpreting the survey data.

### **Core Research and Teaching Staff**

**Hillary Abbey, DO, MSc, PgDip, PgCert**  
Senior Osteopathic Lecturer

**Paul D Blanchard, DO, PGDip**  
Senior Clinical Tutor; Research Fellow; Director - Chapman Clinic

**Kevin Brownhill, BSc (Ost)**  
Lecturer statistics, Research Fellow

**David Evans, PhD, BSc (Hons) Ost**  
Honorary Research Fellow

**Sam Keeping, BSc (Hons)**  
Research Administrator

**Thomas Mars, B.Ost. B.Ed. M.A**  
Research Fellow

**Lorraine Nanke, BSc (Hons), MSc Clin Psych, PhD**  
Lecturer Research Methodology

**Tamar Pincus BSc (Hons), MSc, MPhil, PhD**  
Associate Professor

**Stephen Tyreman DO, MA, PhD**  
Professor of Osteopathy and Philosophy, Dean of Osteopathic Education and  
Development

**Steven Vogel, DO**  
Vice Principal (Research and Quality)

**Melanie Wright, BSc (Hons), PhD**  
Area of Studies Manager Critical Analysis and Enquiry Unit, Student Learning Advisor

**Joanne Zamani BSc (Hons), MSc, PgCert, PhD**  
Senior Research Fellow, Head of Postgraduate Studies

# **Publications and Presentations**

# Publications

## Full Papers

**Blanchard, P.** A descriptive account of the development of an osteopathic service within a hospital HIV day care centre. *International Journal of Osteopathic Medicine*, 2009;**12**;97-99.

**Blanchard, P.** HIV-infection and osteopathy. *International Journal of Osteopathic Medicine*, 2009;**12**; 115-120.

**Evans, D. W.** Why do spinal manipulation techniques take the form they do? Towards a general model of spinal manipulation. *Manual Therapy*, 2009;(In Press)

**Evans DW, Breen AC, Pincus T, Sim J, Underwood M, Vogel S, Foster NE.** 2010 The effectiveness of a posted information package on the beliefs and behaviour of musculoskeletal practitioners: the UK Chiropractors, Osteopaths and Musculoskeletal Physiotherapists Low

back pain Management (COMPLeMENT) randomised trial. *Spine*. In press.

**Hyde, D.** Osteopathy and pregnancy. *The Practising Midwife*, 2008;**12** (2); 16-17.

**Mars, T. Abbey, H.** Mindfulness meditation practise as a healthcare intervention: a systematic review. *International Journal of Osteopathic Medicine*, (In Press).

**Pincus, T. Vogel, S. Woodcock, A.** Returning back pain patients to work: how private musculoskeletal practitioners perceive their role (An interview study), *Journal of Occupational Rehabilitation*. (In Press - DOI: 10.1007/s10926-009-9217-9)

## Journal Paper Reviews

**Abbey, H.** Doctors with a special interest in back pain have poorer knowledge about how to treat back pain. *International Journal of Osteopathic Medicine*, 2009;**12**; 150-154.

**Blanchard, P.** Lumbar facet joint osteoarthritis common, but not associated with low back pain. *International Journal of Osteopathic Medicine*, 2009;**12**; 106-109.

**Blanchard, P.** Almost half of young adults have evidence of disc degeneration and other discal pathologies on lumbar MRI.

**Evans, D.W.** More evidence to support the treatment of spinal regions distant from the site of pain. *International Journal of Osteopathic Medicine*, 2009;**12**; 106-109.

**Greenwood, H.** Does chiropractic treatment influence the course of infantile

*International Journal of Osteopathic Medicine*, 2009;**12**; 150-154.

**Evans, D.W.** More data on the audible 'click' associated with joint manipulation. *International Journal of Osteopathic Medicine*, 2009;**12**; 38-43.

**Evans, D.W.** Association between adverse events and outcome for neck pain e a prospective study of chiropractic care. *International Journal of Osteopathic Medicine*, 2009;**12**; 69-71.

colic? *International Journal of Osteopathic Medicine*, 2009;**12**; 69-71.

**Parry, C.** Is the response to chiropractic manipulation of the neck predictable? *International Journal of Osteopathic Medicine*, 2009;**12**; 38-43.

**Searle-Barnes, P.** The influence of musculoskeletal function on respiratory function variables. *International Journal of Osteopathic Medicine*, 2009;**12**; 38-43.

**Searle-Barnes, P.** Self and manual mobilisation improves spine mobility in men with ankylosing spondylitis. *International Journal of Osteopathic Medicine*, 2009;**12**; 150-154.

**Spencer, A.** Mothers' perceptions of the healthcare of children diagnosed with ADHD and receiving treatment aimed at improving motor function within a chiropractic clinic. *International Journal of Osteopathic Medicine*, 2009;**12**; 150-154.

**Vogel, S.** Abnormal cranial rhythmic impulse rates associated with excessive crying of infancy or are they? *International Journal of Osteopathic Medicine*, 2009;**12**; 106-109.

**Walker, S.** How often is low back pain not coming from the back? *International Journal of Osteopathic Medicine*, 2009;**12**; 150-154.

**Waters, M.** Can physical characteristics of the back be predictive of low back pain in healthy workers? *International Journal of Osteopathic Medicine*, 2009;**12**; 69-71.

### Published Abstracts & Editorials

**Gosling, C. Moran, R. Vogel, S.** Attitudes to Research in Australian and New Zealand Osteopaths. *International Journal of Osteopathic Medicine*, 2008;**11**; 154-155.

**Rusu, A.C. Vogel, S. Van der Merwe, J. Pither, C. Pincus, T.** 466 Testing The Schema Enmeshment Model Of Pain (Semp): Cognitive Biases, Depressed Mood And Future Thinking In Chronic Pain, *European Journal of Pain*, 2009: 13,1; S139.

**Pincus, T.** 46 Cognitive Bias In Chronic Pain, *European Journal of Pain*, 2009: 13,1; S21-21.

**Vlaeyen, J. Pincus, T. Linton, S.** 39 Topical Seminar Summary: Pain-Related Fear In Chronic Pain, *European Journal of Pain*, 2009:

**Vogel, S.** NICE clinical guidelines. Low back pain: The early management of persistent non-specific back pain. *International Journal of Osteopathic Medicine*, 2009;**12**; 113-114.

**Vogel, S & Herrick, R.** Service delivery characteristics of UK osteopaths - a cross sectional survey. *International Journal of Osteopathic Medicine*, 2008;**11**; 153.

**Zamani, J. Vogel, S. Moore, A. Lucas, K.** Exploring the use of exercise therapy in UK osteopathic practice. *International Journal of Osteopathic Medicine*, 2008;**11**; 164.

## Presentations

### Platform Presentations

**Browning, S.** Teaching osteopathic students technique; using research to identify good teaching practice. *Bath University Research Students' Conference*, Bath University; July 2009.

**Browning, S.** Teaching osteopathic students technique; using research to identify good teaching practice. *OSEAN [Osteopathic European Academic Network]*; Vienna, Austria; November 2009.

**Hunt, C.** BOst to Integrated Masters. *Osteopathic International Alliance*; Sydney, Australia; October 2009.

**Pincus, T. Santos, R. Vogel, S.** Brain Scanning Back Pain Presents Presented with Movements they "Fear". Soc Back Pain Res. Keele University; Staffordshire 2008.

**Podmore, W.** Big Pharma & CAM. *European Society for the Philosophy of Medicine and Health Care*; Tübingen, Germany; August 2009.

**Tyreman, S.** Bioethics and globalization. *European Society for the Philosophy of Medicine and Health Care*; Tübingen, Germany; August 2009

**Vincent, F.** Osteopathic Concepts in a Clinical Setting: An investigation into students' opinion regarding the effectiveness of the course. *OSEAN [Osteopathic European Academic Network]*; Vienna, Austria; November 2009.

**Vogel, S.** Research teaching and ethics. *[Osteopathic European Academic Network]*; Vienna, Austria; November 2009.

**Vogel, S.** Research informed teaching – low back pain and work. *[Osteopathic European Academic Network]*; Vienna, Austria; November 2009.

**Underwood, M. Vogel S.** NICE debate. Soc Back Pain Res. Chepstow; 2009.

### Keynote Presentations

**Pincus, T.** Cognitive Bias in Pain. *European Congress of Pain*. Lisbon, Portugal; September 2009.

**Pincus, T.** Pain and Depression. *InnerVate, Psychology and Mind Conference*. Birmingham; July 2009.

**Pincus, T.** Who will develop chronic pain: Progress in prediction. *North British Pain Association conference*, Edinburgh; May 2009.

**Tyreman, Stephen.** Osteopathic Scope of Practice. GOsC Regional Consultations; Glasgow; March 2009.

**Tyreman, Stephen.** Osteopathic Scope of Practice.

GOsC Regional Consultations; Gatwick; April 2009.

**Tyreman, Stephen.** Osteopathic Scope of Practice. GOsC Regional Consultations; Stansted; June 2009.

**Tyreman, Stephen.** Osteopathic Scope of Practice. GOsC Regional Consultations; Manchester; July 2009.

**Vogel, S.** Fear and avoidant behaviour – what exactly gets avoided? SOM & BIMM Winter Symposium; Chester; November 2008.

**Vogel, S.** NICE guidelines for Low Back Pain. Musculoskeletal Research into Practice. Keele University

and West Midlands North Comprehensive and Primary Care Research Networks; Stafford; Sept 2009.

# **Supervisors and Areas of Interest**

## ***Research Supervisors & Areas of Interest***

### **Abbey, Hilary.**

Psychosocial factors in manual therapy; therapeutic relationships; clinical and patient management/practice issues; and osteopathic concepts.

### **Barker, Greg.**

Nutrition; general aspects of osteopathy.

### **Blanchard, Paul.**

Peripheral neuropathy in HIV; diabetes; neurology; clinical practice; psychosocial issues.

### **Brownhill, Kevin.**

Physical measurement; back and spinal motion.

### **Browning, Simon.**

Ergonomics, exercises for patients, core stability, computer based learning, differential diagnosis, technique and effects on tissues (HVT/MET/ST)

### **Calvert-Painter, Ben.**

Sports injuries; tapping and strapping; core stability; HVT; the manual and physiological effects of manipulation and mobilisation; stretching; rehab exercises; orthopaedics; myofascial acupuncture and trigger point.

### **Chippendale, Emma.**

Pain scales (accuracy); HIP mobility & dancers; HIV; paediatrics; musicians injuries; pain; patient management; psycho-social issues/osteopathic concepts; ergonomics in the work place and any other experimental research.

### **Coles, Alan.**

Sports science (experimental).

### **Collins, Martin.**

The physiological basis of osteopathy; the history of osteopathy.

### **Cooke, Simon.**

Investigating relationships between body areas; basic philosophical principles of

Osteopathy and what separates it from other forms of treatment.

### **Davies, Tracy.**

Children and the elderly; sport science.

### **Durant, Alison.**

Osteopathic technique; the mechanisms behind osteopathic techniques; soft tissue techniques.

### **Edis, Jonathan.**

The history and philosophy of osteopathy.

### **Gill, Kevin.**

Nutrition; sports science; sports injuries; rehabilitation stretches; practice and business management.

### **Gupta, Bob.**

Clinical/ processes & delivery of care; interventions.

### **Humphreys, Stephen.**

Ergonomics in the workplace.

### **Keeping, Sam.**

Cost effectiveness analysis in healthcare; health policy.

### **Kinch, Ceira.**

Osteopathy in general; sports; psychology.

### **Lansman, Robin.**

Rehabilitation; muscle physiology; knee pain; runners; blood flow; sports injuries; stretching; educational; GP professional communication skills; interpersonal values.

### **Leighton, Chris.**

Orthopaedics; rheumatology and neurology; osteopathic technique.

### **Levitan, Ruth.**

Cranial osteopathy, children, retention of primitive reflexes, ADHD and autism.

### **London, Simeon.**

Clinical audit; clinical practice; governance; the patient experience; quantitative studies.

**McCoy, Robert.**

Osteopathic treatment with the elderly; projects using new measuring equipment.

**Morrison, Rebecca.**

Osteopathic technique, sports injuries & rehabilitation, pedagogy

**Podmore, Will.**

History; ethics; philosophy.

**Propert, David.**

Paediatrics; functional medicine; diagnosis.

**Robinson, Helen.**

Dry needling; expectant mothers; anything experimental with quantitative data analysis.

**Scheibelhoffer, Ida.**

Posture; ergonomics; yoga; pilates; RSI.

**Scullard, Anna.**

Paediatrics and pregnancy; psychosocial consequences of health and disease; IVM.

**Skudder, Richard.**

Headaches; TMJ dysfunction; clinical skills; muscle retraining.

**Spencer, Kieren.**

Breathing; cranial osteopathy.

**Stewart, Michael.**

Qualitative studies; attitudes; nutrition; heart disease.

**Tyreman, Stephen.**

Health care and philosophy on causation in clinical practice.

**Vincent, Frank.**

Concepts/principles; TTT of emotions type issues; importance of the diaphragm/respiration; depression; pain management.

**Vogel, Steven.**

'Guidelines & evidence based practice; psychosocial factors in back pain-risk & identification; measurement of depression/anxiety in patients with persisting pain; musculoskeletal practitioners' attitudes & belief about back pain; work related issues; adverse events; prescribing & clinical outcomes; audit.

**Waters, Mark.**

Widening participation; communication with patients; perceptions of osteopathy; osteopathic education; collaborative learning.

**Wiggins, Francesca.**

Anatomy; application of osteopathy; interaction with patients; neurology.

**Wolff, Margaret.**

Professional regulation; professionalism and standards; ethics.

**Wright, Melanie.**

Biochemistry and metabolism; child and adult obesity research; patterns of human growth; statistical modelling.

# **Undergraduate Dissertations**

## ***Undergraduate Dissertations***

### **Allen, Lucy.**

A Narrative Review on the Epidemiology of musculoskeletal injuries in sports players with lower limb injuries.

- Supervised by Robert McCoy

### **Aronow, Michael.**

How student osteopaths perceive their ability to assist patients with depression.

- Supervised by Hilary Abbey

### **Aust, Christopher.**

Chronic, non-specific low back pain – effective interventions within an osteopathic setting. A narrative review.

- Supervised by Francesca Wiggins

### **Austen, Thomas.**

The effects of manual therapy on the sympathetic nervous system.

- Supervised by Andrew Lay

### **Barr, Justin.**

Do osteopaths screen patients for psychosocial yellow flags.

- Supervised by Bob Gupta

### **Bate, Felicity.**

Systematic Review: To identify factors predicting non-adherence to a prescribed exercise or stretching regime in the older person.

- Supervised by Joanne Zamani

### **Batten, Robin.**

A questionnaire survey to determine how often osteopaths take blood pressure and how the results relate to patient treatment and management.

- Supervised by Trevor Jeffries

### **Baynton, Jennifer.**

A questionnaire study investigating the attitudes and self-reported practices among Osteopaths regarding the management of obese patients.

- Supervised by Kevin Gill

### **Beard, Zachary.**

The osteopathic management of musculoskeletal injury in professional boxers.

- Supervised by Alan Coles

### **Blackburne, Christopher.**

A study into whether mind-body therapies, particularly short-term meditation programs, are useful in the treatment of patients suffering with chronic musculoskeletal pain.

- Supervised by Soran David

### **Brownrigg, James.**

A Study Comparing the Importance of the Core Principles of Osteopathy between Second and Fourth Year Students.

- Supervised by Jonathan Edis

### **Bruce-Gardner, Ned.**

The use of osteopathic manipulative therapy in the treatment of respiratory condition: an historical review of changes in theory, praxis and research from the start of the twentieth century to the present.

- Supervised by David Propert

### **Butler, Enda.**

Interview based exploration into practicalities of employing Guided Imager or Visualisation techniques in the treatment of musculoskeletal conditions.

- Supervised by Frank Vincent

### **Byrne, Gillian.**

A Narrative Review on the effectiveness of manual therapy treatment of Primary Dysmenorrhoea.

- Supervised by Stephen Sandler

### **Carey, Samantha.**

An investigation into physical activity levels and the prevalence of hyperventilation.

- Supervised by Kevin Gill

**Ceccarelli, Paola.**

An exploration into the concept of inhibition in Osteopathy: is there a consensus in definition and application?

- Supervised by Jonathan Edis

**Cicccone, Mario.**

The efficacy of manipulation under anaesthesia in the treatment of frozen shoulder.

- Supervised by Andrew Lay

**Contractor, Fatema.**

An investigation into the association between post-partum low back pain and method of delivery.

- Supervised by Stephen Sandler

**Cound, Edward.**

A review of aetiological factors for developing chronic fatigue syndrome and related fatigue illnesses in adolescents.

- Supervised by Linda Goddard

**Davids, Ricardo.**

Is there a correlation between transversus abdominis function and active straight leg raise test performance?

- Supervised by Joanne Zamani

**Davies, James.**

A comparison of the approaches used by chiropractors and osteopaths in treating acute and chronic low back pain.

- Supervised by Stephen Tyreman

**del Rio Pose, Fernando.**

Measurement of the mouth opening and the pain pressure threshold in a group of tension-type headache subjects and in a control group: Is there any difference?

- Supervised by Richard Skudder and Hilary Abbey

**Dent, Tammy.**

Back Pain in Pregnancy. The views of Obstetric Professionals on Osteopathic Treatment during Pregnancy. How these views have changed since 2000.

- Supervised by Stephen Sandler

**Diaz, Shanilla.**

Clinical Reasoning in Osteopathy: insight into the decision-making strategies of experienced osteopaths.

- Supervised by Trevor Jeffries

**Dillon, Luke.**

An investigation into hygiene attitudes, knowledge and behaviour of BSO students in the clinical environment.

- Supervised by Simeon London

**Dowden, Stuart.**

A survey of job satisfaction and intention to quit of Osteopaths in the UK.

- Supervised by Trevor Jeffries

**Dudaszek, Julia.**

Measuring body awareness in relationship to health outcome in an investigation into the psychoemotional effects of osteopathic treatment.

- Supervised by Hilary Abbey

**Ellerton, Jessica.**

Fear-avoidance beliefs of 3rd and 4th year BSO students.

- Supervised by Robin Lansman

**Esplin Jones, Sophie.**

A study into potential relationships between foot posture and lower extremity injury in recreational netball players.

- Supervised by Chris Thomas

**Evens, Yvonne.**

The prevalence of undiagnosed type 2 diabetes in the osteopathic clinic.

- Supervised by Paddy Searle-Barnes

**Fadipe, Gwyneth.**

Reliability of palpation of the cranial rhythmic impulse: A Systematic Review.

- Supervised by Steven Vogel

**Francis, Brett.**

Cryotherapy: What the evidence based osteopath should know.

- Supervised by Francesca Wiggins

**Fraser, Anastasia.**

An exploration of illness perceptions of patients awaiting osteopathic treatment.

- Supervised by Joanne Zamani

**Gardner, Lucy.**

To assess the affect of Whole Body Vibration exercise on bone mineral density: A systematic review.

- Supervised by Christopher Leighton

**Gilbert, Ben.**

An investigation into the variability of pressure applied by student osteopaths during the technique of sub-occipital inhibition.

- Supervised by Trevor Jeffries

**Gilbert, Howard.**

Does singing increase peak expiratory flow rate (PEFR)?

- Supervised by Melanie Wright

**Gittoes, Elizabeth.**

A comparative study to examine the utility and benefit of an information leaflet to enable chiropractors, osteopaths and physiotherapists to support patients with chronic low back pain to return to work.

- Supervised by Steven Vogel

**Gomez, Francisco.**

First stages of an audit cycle of the current standards for recording active spinal movements of new patients presenting at the British School of Osteopathy clinic with low back pain.

- Supervised by Simeon London

**Hall, Sam.**

A comparison of the efficacy of dynamic and static stretching on hamstring flexibility and Retention of those effects.

- Supervised by Ben Calvert-Painter

**Harrison, Nicola.**

A qualitative study into osteopathic clinical reasoning and practitioner variations in the management of low back pain.

- Supervised by Paddy Searle-Barnes

**Hedges, Cassandra.**

Attitudes, knowledge and practices of final year undergraduate BSO students regarding???

- Supervised by Kieren Spencer and Melanie Wright.

**Hunter, Amy.**

Conservative treatment of Hallux Valgus (bunion deformity); A comparison of the beliefs and practices of osteopaths and chiropractors in the UK.

- Supervised by Paul Blanchard

**Jack, Caroline.**

Manual therapy of Lateral Epicondylitis: a narrative review.

Supervised by Andrew Lay

**James, Dickie.**

An experiment to correlate hamstring flexibility with hip flexion using a goniometer on BSO students.

- Supervised by Chris Thomas

**Johnson, Baden.**

An experiment to compare the effect of soft tissue massage versus static stretch on iliotibial band (ITB) stretch in football players, using a tape measure.

- Supervised by Kevin Gill

**Jones, Alex.**

An investigation into the use of Magnetic Resonance Imaging by osteopaths.

- Supervised by Hilary Abbey

**Kosmalski, Joanne.**

A narrative review of systematic reviews on the effect of cervical manipulation on headaches.

- Supervised by Robert McCoy

**Lambert, Rachel.**

Questionnaire survey on osteopathic opinion towards the taking of blood pressure as part of the osteopathic consultation.

- Supervised by Chris Thomas

**Larrain Maria.**

Clinical Supervision: A questionnaire survey exploring osteopaths' attitude to receiving formal support for their clinical practice.

- Supervised by Hilary Abbey

**Lasnet, David.**

A survey exploring when and why osteopaths choose to use structural or cranial techniques.

- Supervised by Paul Blanchard

**Loh, Benjamin.**

A study of osteopathic practice in Singapore.

- Supervised by Simon Cooke

**Long, Karen.**

A comparative study of the diagnosis, conceptual models, and treatment used by classical and non-classical osteopaths in a specific case study.

- Supervised by Paddy Searle-Barnes

**Lowman-Riggs, Rebecca.**

A comparative study of the anatomy of the lower limb between peoples of European continental origin and African continental origin: A Narrative Review.

- Supervised by Melanie Wright

**McIntosh, Fiona.**

An investigation into differences between patients' self-reported levels of anxiety and assessments made by the students treating them.

- Supervised by Hilary Abbey

**Mesquita, Cristina.**

The approach of osteopaths and physiotherapists in diagnosing, treating and managing Tension-Type Headaches. An interview study.

- Supervised by Hilary Abbey

**Mills, Lyndsy.**

A qualitative study exploring clinic tutors' perceptions of the current management of patients with chronic pain and depression at the BSO.

- Supervised by Hilary Abbey

**Mitchell, Jemma Nicole.**

The philosophy of osteopathy: A New Hope.

- Supervised by Jonathan Edis

**Money, Susannah.**

An investigation into the opinions of osteopaths on the treatment of Ankylosing Spondylitis with osteopathy.

- Supervised by Francesca Wiggins

**Morgan, Patrick.**

An ultrasound investigation of an association between sub-occipital muscle tone and intra-cerebral hemodynamics.

- Supervised by Kevin Brownhill

**Nijjar, Harmohan Kaur.**

Comparing the taught and practised curriculum of postural assessment of patients with low back pain.

- Supervised by Ida Scheibelhoffer

**Parmar, Chandani.**

Pathophysiology of focal hand dystonia and associated treatment protocols.

- Supervised by Trevor Jeffries

**Phillips, Rosalind.**

A Narrative Review on the therapeutic use of exercises and specifically proprioception rehabilitation on non-structural scoliosis.

- Supervised by David Probert

**Pickard, James.**

Is there a correlation between extension of the first metatarsophalangeal (FMTP) Joint and extension of the hip?

- Supervised by Adam Boucher

**Pleming, Harriet.**

A Narrative Review on the effectiveness of manual therapy in the treatment of Vulvodinia, Vestibulodynia and Vaginismus.

- Supervised by Melanie Wright

**Prince, Chantal.**

What effect does horse riding duration and saddle type have upon low back pain suffered by dressage and show-jumping competitors?

- Supervised by Simon Browning

**Purcell, Andrea.**

Endings in osteopathy.

- Supervised by Hilary Abbey

**Redfern, Miranda.**

A qualitative study on accessing an osteopathic education, from the perspective of ethnic minority students at the British School of Osteopathy.

- Supervised by Margaret Wolff

**Reed, Clare.**

An investigation into the incidence of pain & injury amongst surfers in the UK.

- Supervised by Alan Coles

**Reed, P.J.**

A qualitative study into the integration of osteopathic care with allopathic medicine in the rural setting.

- Supervised by Paddy Searle-Barnes

**Richards, Chris.**

What makes people satisfied with Complementary Medicine?

- Supervised by Simon Cooke

**Richardson, Nicola.**

The prevalence of non-traumatic musculoskeletal injuries amongst non-competitive recreational cyclists.

- Supervised by Kevin Gill

**Rooney, Alicia.**

Prognosis for low back pain: are BSO students equipped to predict chronicity in patients with acute low back pain?

- Supervised by Steven Vogel

**Roper, Emily.**

A Narrative Review of common injuries found in adult professional musicians.

- Supervised by Chris Thomas

**Ross, Sarah.**

Crunch time- A systematic review of BSO undergraduate research investigating the physiological benefits of soft tissue manipulation for auditing purposes.

- Supervised by Stephen Tyreman

**Rowley, Olivia.**

To what degree do practitioners and patients at the BSO hold similar pain beliefs?

- Supervised by Vanessa Finglass

**Royal, Holly.**

Low back pain clinical practice guidelines: the thoughts and opinions of expert chiropractors, osteopaths and physiotherapists.

- Supervised by Will Podmore

**Sainsbury, Julia.**

Interview study of BSO clinic tutors attitudes: the management of patients with yellow- flag risk factors in the BSO clinic.

- Supervised by Stephen Humphreys

**Savona, Alessio.**

A qualitative study on the use and effects of spinal manipulation in clinical settings.

- Supervised by Ben Calvert-Painter

**Shaikh, Tahir.**

Why have students chosen to study at the British School of Osteopathy?

- Supervised by Kevin Brownhill

**Sidhu, Amrit Kaur.**

A quantitative research study into patient satisfaction with a generated diagnosis within an osteopathic clinical setting.

- Supervised by Simeon London

**Sliiden, Tommi.**

A survey of injuries and physical therapy management in freelance West End performers.

- Supervised by Melanie Wright

**Swift, Steven.**

Can cross fibre soft tissue massage to the calf musculature improve perceived and measured temperature of the feet in female recreational exercisers?

- Supervised by Alison Durant

**Tonks, Andrew.**

A qualitative study into osteopaths' views on the pain / tissue damage relationship and the influence of these on management.

- Supervised by Frank Vincent

**Toumazou, Anthony.**

The efficacy of muscular energy technique (MET) versus high velocity low amplitude thrust (HVLAT) on increasing gross trunk range of movement.

- Supervised by Simon Browning

**Ul-Haq, Kiran.**

An experiment to investigate the effect of existing pain, and pain intensity, on pressure pain thresholds.

- Supervised by Emma Chippendale

**Valinsky, Rachel.**

Attitudes and perceptions of British School of Osteopathy students towards postgraduate osteopathic research.

- Supervised by Joanne Zamani

**Vargas, Rebecca.**

To what extent is there a correlation between BSO patients report of pain experience and BSO student osteopaths assessment of their patients pain experience?

- Supervised by Hilary Abbey

**Waldman, Abigail.**

Communicating the psychosocial in osteopathic consultations: Patient narratives and the construction of health identities.

- Supervised by Soran David

**Walmsley, Olivia.**

Which factors influenced first year Master of Osteopathy students in their decision to study at the British School of Osteopathy and enter the osteopathic profession?

- Supervised by Andrew Lay

**Wariabharaj, Parveen.**

Do foot orthotics relieve symptoms experienced by osteopathic patients?

- Supervised by Robin Lansman

**West, Ellena.**

A review of risk factors for Nonspecific Low Back Pain in Children.

- Supervised by Melanie Wright & Frank Vincent

**Wilkes, Chris.**

Kinematic analysis of tri-plane compensations for artificially induced limitation of the first metatarsophalangeal joint: A Preliminary Study.

- Supervised by Kevin Brownhill

**Wilson, Martin.**

A systematic review of the benefits of exercise for people with knee Osteoarthritis.

- Supervised by Robert McCoy

**Witherley, Katie.**

What do patients look for in their osteopath?

- Supervised by Will Podmore

**Woodward, Rachel.**

Is Pelvic Floor Muscle Training (PFMT) effective in the management of Urinary Incontinence in older women: A Systematic Review.

- Supervised by Alison Durant



**College of Osteopaths  
Annual Research Report 2008-2009**

## **Contents**

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## **Introduction**

The College of Osteopaths provides:

- a modularised five year part-time BSc (Hons) Osteopathy degree delivered in collaboration with Middlesex University
- a modularised five year part-time BSc (Hons) Osteopathy degree delivered in collaboration with Keele University
- a modularised MSc in Professional Studies (Osteopathy) in collaboration with Middlesex University

Both undergraduate programmes have successfully gained recognised qualification (RQ) status from the General Osteopathic Council; the Middlesex programme in 2001 and the Keele programme in 2008. The MSc in Professional Studies was validated in 2008.

During 2008-2009 the focus for the research team has been to:

- review the research element of the undergraduate programme and update teaching and support materials
- contribute to the development of the MSc in Professional Studies (Osteopathy)
- collaborate with other institutions on NCOR Adverse Events Projects
- encourage dissemination of research findings
- encourage the further development of an evidence based culture across the college.

## **Research Team, Esteem Factors and Areas of Interest**

**Linda Goodman** –BSc (Hons) DO ND RGN MA

Linda Goodman is Past President of the General Council and Register of Naturopaths (GCRN) (2008-09), sits on the Accreditation Board; is a Mentor for the Naturopathic Degree course at Westminster University and represents the GCRN on the General Naturopathic Council, dealing with regulatory issues. She has an MA in Medicine, Science and Society - Historical and Philosophical Themes from Birkbeck College, University of London and a Certificate in International Human Rights Law and Practice from the LSE. She is a senior lecturer at the College of Osteopaths, covering Sociology of Health.

Her particular areas of interest include:

- sociology of health, illness and disease
- history and philosophy of science and medicine
- women's health problems
- cranial osteopathy
- naturopathy
- qualitative methods

**Rachel Ives** BSc (Hons) DO MSc

Rachel Ives has fifteen years experience in Osteopathic Education and gained an MSc in education Management from Greenwich University. She works as a reviewer for the Quality Assurance Agency and Assessor for the General Osteopathic Council. She has contributed to

steering groups for research projects in to adverse events in Osteopathy, and has presented at Osteopathic Education conferences. She is a senior manager at the College of Osteopaths Her particular areas of interest include

- sociological perspectives on health, gender and race
- cross-cultural perspectives on health
- educational research
- qualitative methods

**Janine Leach** BSc (Hons) DO ND PhD HonMFPH

Janine Leach is senior Research Fellow at the University of Brighton. She is a member of the National Cancer Research Institute (NCRI) Complementary Therapies Clinical Studies Development Group, the General Naturopathic Council, the General Osteopathic Council and the Research Council for Complementary Medicine. She was associate editor for the International Journal of Osteopathic Medicine (2005 – 2008), President of the British Naturopathic Association: Executive Council (2004-2008), member of the Integrated and Complementary Research Development Group (ICCORD) of the Price's Foundation for Integrated Health, UK (2002-2007). She serves on a number of academic panels for Osteopathic Education Institutions (OEIs) and is referee for *Manual Therapy* and *International Journal for Osteopathic Medicine*.

Her particular areas of interest include

- risk and informed consent
- osteopathic treatment of headache and migraine
- cancer patients

**Jeremy Longland** BSc (Hons) Engineering BSc (Hons) Osteopathy MBA

Jerry Longland brings a different background to the research team.

A degree in engineering, a masters in business (MBA) topped off with another degree in Osteopathy, are his formal qualifications.

Many years experience in the automotive industry, with a specialist graduation from the Six Sigma Academy as a Black Belt in the use of statistics in problem solving makes him a useful mind to apply to research questions. He lectures on statistics on the undergraduate programme.

His particular areas of interest include

- cranial, equine and babies
- the importance of measurement
- quantitative methods

**Amanda Phillips** BSc (Hons) Geography BSc (Hons) Osteopathy MA Education

Amanda Phillips gained her MA in Education in 1990 and has particular interest in educational research. She joined the College of Osteopaths as a research tutor in 2005 and also leads their Tissue Dynamics, Osteopathic Skills and Supportive Skills modules. She has recently developed the Access to Osteopathy programme which is taught in conjunction with Barnet College.

Her particular areas of interest include

- MET
- population and patient studies

- osteopathic education
- quantitative and qualitative research methods

**Julie Thompson** BSc (Hons) Plant Biology BOST PhD PGCE

Julie Thompson leads the research team and delivers the undergraduate research skills programme. She started her academic career as a botanist and freshwater biologist and gained her PhD in 1982. Following a successful career in educational management she achieved her BOST in 2005 and has since undertaken post graduate training in cranial osteopathy. She is a member of the Sutherland Cranial College Research Sub Committee and is a lecturer for Boston University (British Programme). She is an external assessor for The BSO Individual Inquiry Day for final year students and represents the College of Osteopaths on the National Council for Osteopathic Research.

Her particular areas of interest include

- craniosacral treatment including BLT
- the elderly
- neurology
- quantitative and qualitative methods

## Current Research

**NCOR Adverse Event Project 2: A narrative synthesis of the literature on communicating risks of treatment to patients in osteopathic practice**

starting 01/02/09 for 6 months

£6930 from the National Council for Osteopathic Research

Co-applicants: **Dr Janine Leach**, Dr Anne Mandy and Dr Vinette Cross, University of Brighton

Matthew Hankins, Brighton and Sussex Medical School

**Rachel Ives**, College of Osteopaths,

Kevin Lucas and Mark Cage, University of Brighton

The primary aim of this study will be to summarise the knowledge in published research and other types of literature such as clinical guidelines in order to inform three areas of osteopathic practice: effective ways of communicating risk of adverse effects to patients, good practice when seeking informed consent from patients, and practitioners' understanding of clinical risk.

**NCOR Adverse Events Project 3: Trends in insurance claims and complaints to the regulator**

starting 01/05/08 for 12 months

£18305 from the National Council for Osteopathic Research

Co-applicants: **Dr Janine Leach** and Dr Anne Mandy, University of Brighton

Prof Elizabeth West, University of Greenwich

Brenda Mullinger, European School of Osteopathy

**Rachel Ives**, College of Osteopaths

The aim of this study is to create a profile of the complaints that have been made by patients against osteopaths over the past decade. The profile will show how many complaints have occurred and of what type, and investigate whether there are any trends or patterns in the

data. We also aim to gather detailed data for certain types of complaint to try to understand why they occurred.

## **Journal Publications**

### **Research Team**

Newman Turner R, **Leach J**, Robinson D. First impressions in complementary practice: the importance of environment, dress and address to the therapeutic relationship. *Complementary Ther Clin Practice* 2007;13:102-109

**Leach CMJ**, Strutt R, Shaw Q. Patients' perceptions and satisfaction with treatment in a UK osteopathic training clinic. (abstract) *Forsch Komplementarmed* 2007;14 (suppl 1):14. Impact factor 1.4

**Leach J**. Editorial comment on 'developing clinical guidelines for the physiotherapy management of whiplash associated disorder (WAD)' by C. mercer, A. Jackson and A. Moore. *Int J Ost Med* 2007; 55.

Strutt R, Shaw, Q, **Leach J**. Patients' perceptions and satisfaction with treatment in a UK osteopathic training clinic. *Manual Therapy* 2008 :13(5); 456-467

**Leach J**. Osteopathic support for a survivor of gastric cancer: a case report. *International Journal of Osteopathic Medicine* (2008) 11(3): 106-111. doi:10.1016/j.ijosm.2008.03.005

**Leach J**. Towards an osteopathic understanding of evidence (Editorial). *Int J Ost Med*. 2008: 11;3-6

Mathews M, Thomas E, **Leach J**. Two observational studies of the "Sunflower method" of treatment of children with dyslexia. Submitted to *Comp Ther Medicine*

**Leach J**, Strutt R, Shaw Q Patient satisfaction with osteopathic treatment. *Focus Altern Complement Ther* 2004; **9**: 23-4

### **Undergraduates**

**Brown, G**. Do pre-adolescent performance tennis players show signs of shoulder imbalances compared to post adolescent tennis players? A pilot study. *Med Sci Tennis* 2008, **13**(2): 22-25

## **Peer Reviewed Conference Presentations and Posters**

### **Research Team**

**Leach CMJ**, Strutt R, Shaw Q. Patients' perceptions and satisfaction with treatment in a UK osteopathic training clinic (oral). International Congress on Complementary Medicine Research, 2007, Munich.

**Leach J**. Migraine patients' views of osteopathic treatment. (oral) Alternative and Complementary Health Research Network conference, 2007, Nottingham.

**Leach J**, Fawkes C. What evidence counts in the hands of osteopaths? (invited presentation). King's Fund and Prince's Foundation for Integrated Health conference "Assessing Complementary Practice: Building consensus on appropriate research methods", October 2007, King's Fund, London.

**Leach J**. Publish or Perish (Debate). Advancing Osteopathy 2008 conference, London, Feb 2008.

**Leach J**. Can trials tell us what we need to know? (debate). Advancing Osteopathy 2008 conference, London, Feb 2008.

Heney C, **Leach J**. Does osteopathy benefit children with ADHD? (Poster). Advancing Osteopathy 2008 conference, London, Feb 2008.

**Leach J**, Strutt R, Shaw Q. Patient satisfaction with osteopathic treatment (poster). Advancing Osteopathy 2008 conference, London, Feb 2008.

Fawkes CA, Johnston A, **Leach CMJ**. A pilot study to investigate patient satisfaction with osteopathy in private practice – a qualitative analysis. Advancing Osteopathy 2008 conference, London, Feb 2008.

**Leach J**, Fiske A, Mandy A, West E, Mullinger B, Ives R. Trends in complaints against UK osteopaths: protocol and preliminary results (Oral) 10<sup>th</sup> International Congress of the German Osteopathic Association (VOD), October 2008, Schlangenbad, Germany.

**Leach J**, Fiske A, Fawkes, C. Tackling the Darzi agenda in osteopathy: what is the optimum study design to investigate patient expectations of treatment. CAM STRAND Developing Research Strategies Conference, London, April 2009.

## **Non Peer Reviewed Conference Presentations and Posters**

### **Research Team**

**Leach J**. "Use of CAM by cancer patients" on behalf of NCRI CAM CSDG within MSc in Clinical Oncology, University of Birmingham. March 2008.

**Leach J**. Research Governance and Ethics in student projects. Staff Development seminar, College of Osteopaths, April 2008.

**Leach J**. What is the evidence on cranial osteopathy? International Cranial Association Workshop, July 2008.

**Leach J**. Designing a study to explore patient expectations of osteopathic treatment: balancing validity, rigour and patient diversity. CRC Seminar, University of Brighton, May 2009.

## **Occasional Papers In Non- Peer Reviewed Journals And Other Media**

### **Research Team**

Leach J. Plagiocephaly in infants and the use of helmets: Report from Study day and Workshop. ICRA News, March 2009

Tucker B, Leach J. Investigating patient expectations of osteopathic Treatment. The Osteopath, April/May 2009

Tucker B, Fawkes C, Leach J. Osteopathic care – what do patients expect? The Osteopath, June/July 2009

Leach J. Research in Naturopathy. Section on the British Naturopathic Association web site. [www.naturopaths.org.uk](http://www.naturopaths.org.uk), 2009.

Leach J. Naturopathy can improve quality of life after gastric cancer. Br Naturopathic J. 26;11-14: 2009

### **Professional Presentations For Lay Audiences**

Leach J. Can hands-on therapies help myeloma patients? Talk for Myeloma UK, London Group, July 2009.

## **Annual Research Conference**

The third annual research conference was held on November 15<sup>th</sup> 2008.

The purpose of the conference was to

- to disseminate findings of research carried out at the college
- to give new graduates an opportunity to develop their career by presenting at a research conference
- to give undergraduates an opportunity to learn from the achievements of recent graduates
- to raise the profile of research and evidence based practice within the college
- to provide colleagues with an opportunity to discuss developments in osteopathic research

The focus of this year's conference was both osteopathic education and practice.

The conference was attended by fourth and fifth year students, as well as staff and alumni.

### **Keynote Speaker**

**Jorge Esteves:** Looking 'Inside the Black Box': investigating processes in osteopathic education and practice

### **Staff Presentation**

**Mark Lawrence:** Assessment at the College of Osteopaths

### **Recent Graduate Presentations**

**Gillian Brown:** Shoulder imbalances in pre-adolescent performance tennis players

**Andy Gall:** Pregnancy-related pelvic pain (PRPP)

**Sara Povey:** Intra and inter-rater reliability of the Schober (skin distraction) test for the assessment of lumbar flexion

Power Point presentations from the Conference are available on the College website.

## **Undergraduate Research Projects**

Undergraduates are introduced to research during the Level 1 Supportive Skills Module where they consider the importance of evidence based practice and carry out a simple investigation. Research Skills are developed during the Level 3 Research Skills module delivered during the fourth year. This is followed by a level 3 Research Project module. Students undertake either a piece of primary research or an extended literature review. All projects are reported in the format of a research paper and are limited to 3000 words.

Abstracts are available on the College website.

19 students submitted projects. The marks were distributed as follows:

≥70%	3 students
60-69%	7 students
50-59%	6 students
40-49%	3 students

<b>Student</b>	<b>Title</b>
Michael Bexton	An experimental study to investigate intra- and inter-practitioner reliability of final year osteopathic students in static palpation and identification of lumbar spine landmarks in side lying, asymptomatic patients
Sam Boden	Who are the patients and what are their reasons for non-attendance in an osteopathic teaching clinic?
Jordan Cotter	'Is low back pain associated with high body mass index? A cross sectional study using patient data from the College of Osteopaths teaching clinic'
Hannah del Ponte	What is the role for osteopathy in the treatment and management of hip dysplasia? A literature review.
Kate Finn	A question of hand hygiene? An observational study to compare and contrast current hygiene habits at the College of Osteopaths teaching clinic with the unified cross infection prevention guidelines set down by the World Health Organisation, National Health Service and the General Osteopathic Council.
Alison Fricker	Assessing the quality of communication during consultations within an osteopathic teaching clinic: A questionnaire survey.
Richard Fulton	Has the release of clause 20 in the osteopathic code of practice had an effect on the number of cervical spine manipulations carried out in the college clinic? An audit of COET files.
Sharon Gibbons	An experimental study of inter-rater reliability of the 8 commonly used examinations in the diagnosis of posterior tibialis tendon dysfunction (PTTD) among patients in an osteopathic teaching clinic.
Charlotte Hunt	Prevalence of work-related musculo-skeletal injuries (WRMIs) experienced by osteopaths with five or more years in practice. A questionnaire based study
Gareth Magee	'Why do patients seek osteopathic treatment?' A study to generate and develop a questionnaire capable of investigating patient decision making, resulting in a visit to the osteopath.
Jennifer Morton	A questionnaire-based study to investigate the relationship between the level of pain reported by instrumental musicians and their playing related activity, along with their awareness of osteopathic treatment.
Alexander Poulos	A questionnaire investigation into after treatment advice prescribed by senior students and osteopaths t the College of Osteopaths to patients with low back pain: A pilot study
Mark Rapa	A questionnaire based survey of club level tennis players. Prevalence of causes of low back pain and satisfaction with range of healthcare treatment.
Lynn Robertson	An extended literature review conducted to answer the question: 'How can osteopathy support women with stress urinary incontinence (SUI)?'
Neil Sinclair	Can osteopathy play a role in the management of psoriasis?

Gareth Swallow M00105053	Stretching the hip muscles of external rotation, as indicated by measured hip internal rotation, post isometric relaxation versus self directed active stretching. A controlled intervention, comparative quantitative study of subjects aged twenty to forty five years
James Walsh	Does Foot Posture Index predict injury incidence rate and severity in recreational runners?
Deborah White	A literature review of randomised controlled trials of manual therapy for whiplash associated disorder (WAD).
Vikki Woollett	A clinical audit to investigate the relative benefits of osteopathic treatment in conjunction with orthotics, compared to osteopathic treatment alone.



European School  
of Osteopathy

Annual  
Research Report  
2008–09

October 2009

## **Contents**

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2. Research Culture and Environment at the European School of Osteopathy
3. Structure of the ESO and Core Staff
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## 1. Introduction and Message from the Principal

This has been a year of consolidation for research at the European School of Osteopathy (ESO), when the endeavours of past years have started to bear fruit. This is demonstrated through a number of publications, the list of which I am pleased to share with you within the pages of this report. In particular, our early research initiative exploring how patients might feel after osteopathic treatment is complete and the data are now in the public domain<sup>1</sup>. Further research experience in the area of risk has also been gained from fruitful collaboration with external researchers on two projects funded by the General Osteopathic Council (GOsC). Future institutional research initiatives will therefore be able to draw on this background focused on post-treatment effects.

Over the past year there has been an increased emphasis on research within the undergraduate curriculum as the programme of study converts from BSc to the Integrated Masters Degree in Osteopathy (MOst). Modern students demonstrate considerable curiosity and awareness about the research arena and as providers of osteopathic education we recognise the importance of instilling an understanding and appreciation of the need for research rigour. The MOst degree will challenge their thinking and provide an ideal opportunity to develop research skills of value in later careers. In this way it is hoped that research capacity will build within the ESO as well as within the osteopathic profession and with it the evidence base for osteopathy.

I would like to commend the Research Working Group at the school, together with the Research Advisory Board, for their continued endeavours during a difficult year for all involved in higher education.

**Adrian Barnes, *Principal***

1. Rajendran D, Mullinger B, Fossum C, Collins P, Froud R. Monitoring self-reported adverse events: a prospective, pilot study in a UK osteopathic teaching clinic. *International Journal of Osteopathic Medicine*. 2009;12(2):49–55.

## 2. Research culture and environment at the European School of Osteopathy

The central focus for postgraduate research activity at the ESO is the Research Working Group, which is responsible for implementing institutional research projects and, through liaison with other academic activities, developing research awareness within the school. It works closely with the undergraduate research department to promote strong research-mindedness from an early stage in the BSc and MSt programmes of study. A research dissertation is a fundamental requirement for graduation from either programme. The Research Working Group actively encourages the dissemination of research findings, by providing hands-on support for alumni or faculty members wishing to present or publish their research, and through awarding a prize at graduation for the most publishable undergraduate project.

The activities of the Research Working Group are guided by advice from the Research Advisory Board, which has helped define and refine the school's Research Strategy Framework. In addition, the ESO's research thinking is influenced by a strong commitment to the National Council for Osteopathic Research (NCOR), and to supporting its endeavours directed towards increasing research capacity within the osteopathic profession.

### ESO Research Mission Statement

*To nurture and develop research awareness and activity at the ESO with a view to supporting and informing the teaching and practice of osteopathy.*

### 3. Structure of the ESO and Core Staff

#### **Principal of the European School of Osteopathy**

Mr Adrian Barnes MSc, DO  
Boxley House  
Boxley  
Maidstone  
Kent ME14 3DZ

Tel: 01622 671558  
Fax: 01622 662165  
Email: adrianbarnes@eso.ac.uk

#### **Vice Principal (Academic)**

Also MSc Programme leader  
Dr Paula Fletcher PhD, BSc (Hons), Grad Cert Ed FE

#### **Vice Principal (Osteopathic)**

Mr Steven Bettles MEd BSc (Hons) Ost, BA, DO

#### **Associate Vice-Principal (Research): Honorary Contract**

Mr Christian Fossum DO

#### **BSc Research Project Co-ordinator**

Dr Peter Collins PhD, MBA, BSc (Hons), C Biol

#### **Postgraduate Research Development Officer**

Mrs Brenda Mullinger BSc (Hons), FRSM, HonFICR

#### **Clinic Head**

Mr Robert Thomas BSc (Hons) Ost, BA

#### **MSc Project Supervisors**

Mr Adrian Barnes MSc, DO  
Mr Lance Bird MPhil  
Dr Peter Collins PhD, MBA, BSc (Hons), C Biol  
Dr Paula Fletcher PhD, BSc (Hons), Grad Cert Ed FE  
Mr Clive Hayden MSc, DO  
Ms Diana Pitt MSc, DO  
Mr Dévan Rajendran MSc, BSc (Hons), Dip Hyp, DO, ND, Cert Ed  
Mr Nicolas Tanguy, BSc (Hons) Ost; MSc

#### **Research Working Group Members**

Mr Steven Bettles Med, BSc (Hons) Ost, BA, DO  
Dr Peter Collins BSc (Hons), PhD, MBA, C Biol

Mr Robert Froud BSc (Hons) Ost  
Mrs Brenda Mullinger BSc (Hons), FRSM, HonFICR  
Mr Dévan Rajendran MSc, BSc (Hons), Dip Hyp, DO, ND, Cert Ed

**Research Advisory Board Members**

*Staff and faculty:* Mrs Brenda Mullinger BSc (chair)

Mr Dévan Rajendran MSc, BSc (Hons), Dip Hyp, DO, ND, Cert Ed

Dr Paula Fletcher PhD, BSc (Hons), Grad Cert Ed FE

Mr Steven Bettles Med, BSc (Hons) Ost, BA, DO

*External advisors:*

Dr Dawn Carnes PhD, BSc (Hons) Ost, BSc (Hons) Hum Psych., DO

Dr Janine Leach PhD, QTS, BSc (Hons), DO, ND

Dr Iris Musa PhD, MPhil, FCSP, DipTP, CE

Prof Robert Douglas

## 4. Report from the ESO Research Working Group

### **Research Working Group (RWG) Members**

Peter Collins, Robert Froud, Christian Fossum (external adviser)  
Brenda Mullinger (secretary), Dévan Rajendran

### **Current and recently completed research projects**

Data from the RWG's pilot survey of commonly reported adverse events was presented at the International Conference on Advances in Osteopathic Research (ICAOR7) in Florida (September 2008), for which Robert Froud received the 'Young Researcher' award. The full report of this study is now available on-line and in print (Rajendran *et al* in Publications list on page 11).

Two GOsC-funded projects on which the ESO was collaborating with external researchers have been completed and detailed reports prepared. The first, on defining adverse events, has generated two papers with a co-author from the ESO; one is published in *Manual Therapy* and the other is under review. Following these successful projects, the ESO was invited to collaborate, in a small way, with a further GOsC-funded project on patients' expectations of osteopathy.

### **Visits from experts**

The Research Advisory Board held its third annual meeting and, once again, the RWG benefitted from the insight and expertise provided by the external advisors. The RWG hosted two lunchtime lectures and, in addition, was pleased to welcome Prof Ann Moore, Chair of NCOR, on two occasions. The first provided an opportunity for 3<sup>rd</sup> year students to get an overview of the importance of research to the profession; for the second, as guest speaker at graduation, Prof Moore conveyed this message to a wider audience.

### **Future research activities**

The next RWG project related to adverse events will adopt a mixed methods approach and will involve some qualitative research. To this end, an introductory course on qualitative research was organised for ESO faculty, and delivered by Dr Dawn Carnes in September 2008. It was also attended by representatives from other osteopathic schools and provided a stimulating learning experience. In addition, three ESO staff attended external training on specific facets of qualitative research.

## 5. Postgraduate Degree Completions 2008

MSc – University of Wales

<b>Student</b>	<b>Project Title</b>
Matthieu Boulat-Littorin	Effects of Osteopathic Intervention on Perceived Quality of Life using the WHOQOL-100 instrument. – A pilot study

Postgraduate Diploma in Osteopathy – University of Wales

Kenneth McKenzie

Registered postgraduate students

MSc Osteopathy – University of Greenwich

There are 11 students currently registered on this course, completion expected in 2010/11.

## 6. Conference Presentations and Posters

### Platform presentations

#### 2008

Carnes, D, Mullinger B, Underwood, M. Defining adverse events in manual therapies. *ICAOR7, Bradenton, Florida, USA, September 2008*

Froud R, Rajendran D, Fossum C, Collins P, Mullinger B. How do patients feel post-treatment? Pilot study at a UK osteopathic teaching clinic of self-reported adverse events. *ICAOR7, Bradenton, Florida, USA, September 2008*

Leach J, West E, Mullinger B, Ives R. Trends in complaints against UK osteopaths: protocol and preliminary results. *International Congress of Osteopathy, Germany October 2008*

#### 2009

Pantall A, Barton S, Collins P. Surface electromyography of abdominal and spinal muscles in adult horse riders during rising trot. *International Society of Biomechanics in Sports Conference, Limerick, Ireland, August 2009*

## 7. Publications

### Papers

Rajendran D, Mullinger B, Fossum C, Collins P, Froud R. Monitoring for self-reported adverse events: A prospective, pilot study in a UK teaching clinic. *International Journal of Osteopathic Medicine* 12 (2009) 49-55.

Fletcher P. Clinical Competence Examination – improvement of validity and reliability. *International Journal of Osteopathic Medicine* 11 (2008) 137-41.

Froud R, Rajendran D, Fossum C, Collins P, Mullinger B. How do patients feel post-treatment? Pilot study at a UK osteopathic teaching clinic of self-reported adverse events. *International Journal of Osteopathic Medicine* 11 (2008) 151.

MacPherson H, Thomas K, Armstrong B, de Valois B, Relton C, Mullinger B, White A, Flower A, Scheid V. Developing research strategies in complementary and alternative medicine. *Complementary Therapies in Medicine* 16; 2008:359-62  
doi:10.1016/j.ctim.2008.08.001

### **The following publications are ‘in press’ and available on-line:**

Sonberg M, Mullinger B, Rajendran D. Can osteopathy help women with a history of hypothyroidism and musculoskeletal complaints? Outcome of a preliminary, prospective, open investigation. *International Journal of Osteopathic Medicine* 2009 (in press).  
doi:10.1016/j.ijosm.2009.07.001

Mullinger B. Book review of: Acupuncture Research: Strategies for establishing an evidence base. Ed MacPherson H, Hammerschlag R, Lewith G, Schnyer R. *International Journal of Osteopathic Medicine* 12 (2009) (in press) doi:10.1016/j.ijosm.2009.03.005

Carnes D, Mullinger B, Underwood M. Defining adverse events in manual therapies: A modified Delphi consensus study. *Manual Therapy* 2009 (in press) doi:10.1016/j.math.2009.02.003

### Abstracts

Pantall A, Barton s, Collins P. Surface electromyography of abdominal and spinal muscles in adult horse riders during rising trot. *International Society of Biomechanics in Sports Conference, Limerick, Ireland, August 2009*

## 8. BSc student research theses 2009 – dissertation titles

• Migraines: A literature review.
• A.T. Still philosophy of fascia compared to the latest scientific research.
• The role of electromagnetic fields in the body and their significance to osteopathy. A literature review
• A preliminary investigation of the surface electromyography of rectus abdominis and iliocostalis lumborum muscles and movement of the lumbosacral junction during horse riding.
• Diagnosis and treatment of hip-spine syndrome.
• Autism and the different approaches to autistic patients – a literature review.
• An analysis of the relative of different marketing strategies in acquiring new patients for a private osteopathic practice.
• Osteopathy and Pranayama – investigation of possible blood pressure and heart rate changes after the introduction of yoga breathing exercises (yogic breathing and nadi shodan pranayama) to a group of healthy, females students.
• The variety of shoulder pain diagnosis within the ESO clinic, the representation of data for shoulder pain sufferers held within a clinical database.
• An investigation into whether phrenic nerve treatment increases lung capacity.
• An investigation into the effects of suggestion on cranial bone palpation.
• A study of low back pain experienced by farriers
• A survey to investigate the extent of visceral technique usage amongst UK osteopaths.
• Pilot study on osteopathic treatment and the relief of menopausal symptoms.
• Changes in forward flexion of the trunk following application of a neuromuscular technique on the thoracolumbar fascia.
• Do osteopaths consider training in psychology benefits their patient management?
• Emotions: the importance in treatment.
• Pregnancy: A small guide for osteopaths.
• An investigation to compare the effectiveness of the mothner and post-isometric reflexes on hip flexion.
• Lumbar spine screening tests. Gossip, trunk side bending, reverse gossip electrogoniometric measurement- Statistical analysis.
• Comparison between osteopathy and physiotherapy treatment for hamstring injury in sports.
• An inter-examiner reliability study of static palpation for two pelvic anatomical landmarks and two tests used in the Mitchell Model of pelvic diagnosis.
• An investigation into difference of awareness of veterinary osteopathy between horse and dog owners?
• The effect of footedness on asymmetrical pedaling.
• Myopia and osteopathic considerations.
• A comparative study on satisfaction of osteopathic and orthodox medical examination of Norwegian employee, in occupational health screening context.
• Questionnaire survey investigating the hypothesis that there is higher occurrence of work related muscular-skeletal pain in the first metacarpal-phalangeal joint (MCP) of the thumb, in female osteopaths than in male osteopaths.
• Exploring the inter-relationships of an IVM release of the sacrum as expressed by

an increased range of rotation of the cervical spine.
• Dose the sternal recoil technique have any effect on lung function?
• Business management educational needs of osteopaths a questionnaire study of experienced osteopaths.
• The effect of MET on a football players' kick strength.
• The effect of oscillations applied to T1-T5 their effect on blood pressure.
• The effects of static stretching on maximal grip strength.
• The role of extra-clinical exposure to temperature in pain level and improvement following osteopathic intervention.
• Osteopaths' satisfaction with their choice of career.
• A review of current literature of osteopathic treatment of children with attention deficit / hyperactivity disorder.
• Schizophrenia: A guide for osteopaths.
• Different osteopathic approaches in the paediatric field.
• Water: a literature review of the integral role of water in life and health and therefore it's relevance to osteopathy.
• An osteopathic approach to osteoarthritis.
• Inhibition of the suspensory ligaments of the pleural dome and the effect on cervical range of movement and peak expiratory flow.
• A research questionnaire into the awareness and provision of osteopathic treatment within residential homes in Kent.
• The accessibility of osteopaths to physically disabled people – a survey by questionnaire.
• Visceral referred pain to the shoulder and it's osteopathic considerations
• Attitudes to back pain amongst final year students of osteopathy: a comparative study using the ABS-mp
• An investigation into LBP and ESO student: A questionnaire based study.
• The placebo effect: An unpredictable side-effect of treatment, or a useful tool to be added to the practitioner's arsenal?

## 9. Evidence of Staff Esteem

### *Mr Steven Bettles*

**Awarded** MEd – Open University

### *Dr Peter Collins*

#### **Professional associations**

Member, Institute of Biology, London  
Consultant Biologist, register of the Institute of Biology  
Fellow, Zoological Society of London

#### **Other: External examiner**

Assessor: British School of Osteopathy BSc Undergraduate Research Projects 2001–present

### *Dr Paula Fletcher*

#### **Awards (honorary positions/contracts and educational awards)**

Postgraduate certificate in leadership and management (Open University)

#### **Journal reviewing/refereeing**

Member of the Advisory Board: British Journal of Osteopathy  
Member of the Advisory Board: International Journal of Osteopathic Medicine

#### **Other: External Examiner and Adviser**

Examiner - University of Bedford: Postgraduate Diploma in Clinical Practice of Osteopathy in the Cranial Field (at British School of Osteopathy) 2004-2008  
Examiner - University of Bedford: MSc in Paediatrics 2005–09  
Examiner – University of Brighton: BSc (Hons) Oriental Medicine – acupuncture 2006–10  
External adviser: University of Keele for new (part-time) BSc Hons Osteopathy

### *Mr Robert Froud (Research Working Group member)*

#### **Registration for higher degree programme**

PhD – University of London

### *Mrs Brenda Mullinger*

#### **Professional Associations**

Fellow, Royal Society of Medicine (RSM)  
Honorary (Life) Fellow of the Institute for Clinical Research (ICR)

#### **Research-related external committee membership**

Member, National Council for Osteopathic Research (NCOR)

*Mr Dévan Rajendran*

**Other: Book Proposal Reviewer**  
Elsevier Science, United Kingdom

*Dr Annette Pantall (BSc Project supervisor)*

**Awarded PhD 2008**  
University of Surrey

Research Grants: There were no research grants awarded in 2008-09.

## 10. Academic and Research Links with other Organisations and Institutions

*University of Greenwich:* validates BSc degree for undergraduate entry since 2006

*University of Wales:* validates BSc degree for undergraduate entry 2004 and 2005.

In addition, the ESO values its research links with the following institutions:

Barts and the London, Queen Mary School of Medicine and Dentistry, Centre for Health Sciences

College of Osteopaths

University of Brighton, Clinical Research Centre for Health Professions

University of Greenwich, School of Health and Social Care

Sutherland Cranial College

## **Leeds Metropolitan University Research Report 2009/2010**

### **Undergraduate**

There are currently two cohorts of students enrolled on the undergraduate osteopathy course. The senior year will enter the third year in September 2010 and start their two year research project. In July 2009, the current BSc (Hons) Osteopathy course was revised and approved by the University as an integrated Masters award, Master of Osteopathy (MOst). As part of the development of the MOst award, a decision was taken to increase the emphasis of research within the overall programme. This involved the development of a new module, evidence based practice and changes to the student dissertation, increasing credits and raising the assessment to Masters level. The move to a Masters level dissertation allows a greater scope of research activity within the University research regulations. The academic staff for the osteopathy programme includes Stephen Castleton, Mary Bridger, Jo Waterworth, Agi Sykes, Paul Cairns, Sue Hudswell, Andrew Cunnington and Andrew Goldspink. Clinical staff includes Simon Barnard, Agi Sykes, Paul Cairns and Wendy Cooper.

### **Postgraduate**

There are 14 students on the MSc Osteopathic Sports Care course and all are currently working on their dissertation. One student has completed and several others are close to submitting their final report. It is hoped that several of these projects will be suitable for publication.

### **University/Faculty research**

As an institution and a faculty, research is a central part of the University's work. It is an area that the course team is keen to develop and generate published output in coming years.

### **Leeds Hub**

Members of the osteopathy team at Leeds Met continue to be active in the Leeds hub in NCOR's regional network. Staff assist with meetings and with the projects the group undertake.

## **London College of Osteopathic Medicine.**

### **RESEARCH REPORT FOR 2009.**

#### **Overall situation :**

With the temporary abeyance of the LCOM course and severe financial problems, the survival of the institution was in some doubt at times during the year so research plans had to be modified. The rather protracted process of collaboration with the University of Westminster to set up an RCT became untenable as was the plan for Osteopathic Trusts to provide modest funding for the project. The decision was taken to proceed with an in-house low cost project; Osteopathic Trusts providing clinic space (its only abundant resource), clinicians working for no payment and the Association for Medical Osteopathy contributing £3,000 for running expenses. Should the trial come to successful completion, it could break some form of record for cost-effectiveness.

Happily collaboration with COEI to share clinic space and the recruitment of a cohort of six trainees commencing in clinic in March, have resulted in the LCOM having good prospects of a balanced budget and survival.

**Ethics Committee :** The LCOM REC has been formed and is establishing its modus operandi. Members so far are:

Prof. Andrew Jewell, Professor of Physiotherapy, St George's Hospital Medical School, London. [Chair]

Dr Nefyn Williams, Clinical Senior Lecturer, Primary Care and Public Health, Department of Primary Care and Public Health, Cardiff University

Dr. Babar Abbas, Senior Lecturer, Course Director Biomedical Sciences, Kingston University, Surrey.

#### **The CARL trial**

This trial entitled, Counterstrain Assessed for Restless Legs, has now been running for three months. The protocol has not been weakened by abandoning university collaboration except in the facility they would have provided to quarantine outcome data handling from the clinicians. To mitigate this problem, weekly outcome questionnaires will be filled out in a duplicate, invoice-style book. While top copies are returned by reply-paid addressed envelopes, the duplicates book will remain with the subject only to be released to any independent auditor appointed to confirm trial results. With the potential for upto half a million people to be permanently medicated for RLS at £400 minimum annual cost, demonstration of a cheap curative manipulative approach would be greeted with marked scepticism by those involved in pharmaceuticals. Subjects will be accepted onto the trial certainly until the middle of 2010; initially by contacting the LCOM or they can access details from the Ekbohm Support Group, [www.rlsuk-esa.org.uk](http://www.rlsuk-esa.org.uk)

**Future prospects :** With a healthier flow of students we will hope to facilitate and initiate a research programme. While this is not easy with people studying part-time while maintaining paid careers and family commitments, we will hope to guide them into research models that are achievable despite such constraints. At present there is no prospect of any programme having an obligatory research project entailed.

Roderic MacDonald.

# Annual Report on Research

## **London School of Osteopathy**

**October 2009**

## **Review of Research Activity at the LSO**

### **Historical context**

The dissertation program was introduced to the LSO in 1993 as an essential feature of the integral assessment programme at a standard consistent with an honours level award. The first dissertations were completed and submitted in 1998.

The LSO retained Norman Hester and Steven Reed of Westminster University to support the students with the generation of their dissertations. As mentioned in the last Report they are continuing to provide expertise, encouragement and patience in helping students to clarify, develop and refine initial ideas into more realistic proposals. This help is complemented by guidance concerning the choice and application of statistical support and analysis where necessary in locating and examining emergent findings and general writing up the dissertations. The Principal continues to provide workshops and lectures in the operational aspects of putting a dissertation together.

### **Standards and supervisory staff**

The academic year of 2008-9 is the 12<sup>th</sup> cohort. There were some dissertations submitted of a high standard but generally not as outstanding as the previous two years. We have again included the final grades of this cohort as we consider they reflect the quality of the LSO's graduates. They demonstrate the range and diversity of what the students are capable of. Students are exploring both qualitative and quantitative aspects of issues surrounding the clinical arena. The awards were as follows:

First Class Hons	3
Upper Second	7
Lower Second	4
Third	
Referred	2 (1 resubmitted and passed with a Third, one to resubmit)

We are pleased that we have retained the same team of supervisors for the 2008-9 students. The dissertation program demonstrates the continuing maturity of this team.

Dawn Limbert is now writing up her dissertation for her Masters program at Leeds Metropolitan University. The title of her dissertation is **A study investigating whether reduced proprioception exists in gymnasts with hypermobility.**

Our academic and clinical staff reflect the research ethos being embedded in the school. There are 44 osteopaths of whom 40% possess a DO and 60%, a BSc or higher. 54% possess First Degree, 14% an award at M Level, and 2% a PhD. Only 11 osteopaths have the DO as their highest qualification. With the Academic Staff there are 15 non osteopaths, with 87% at M Level or higher. Nine have PhDs.

### **LSO MSc course**

The LSO is pleased that we have succeeded in having our Bachelor/Masters of Osteopathy of Osteopathy programs validated by Anglia Ruskin University. This will be seen as formal recognition of many parts of the course being delivered at Masters level at the present time and a natural progression leading from the quality of the results of its recent graduates. Due to the course being now at integrated Masters level we have temporarily shelved plans for a post-graduate Masters but the LSO is considering offering a 'top-up' M<sup>ost</sup> degree to graduate osteopaths.

### **Ethical considerations**

By and large, again, it is only ethical issues in relation to research dissertations that have concerned the LSO. Similarly as before, in the majority of cases, the issues were and are minor. However, the one dissertation yet to be resubmitted was referred because of a serious breach of ethics which was neither recognised or addressed by the student. He unfortunately very seldom availed himself of supervisory advice which the supervisor commented upon, on his marking sheet. Steps have been taken to strengthen an already strong process to minimize the risk of this reoccurring.

## **Staff of the LSO registered as dissertation supervisors and areas of interest 2008-9**

### **Mark Bujakowski**

- Biomechanics
- Patients' perceptions
- Motion/palpation reliability

### **Simon Chafer**

- Politics of osteopathy
- Contemporary issues of osteopathy
- Principles & concepts
- Perceptions of patients & practitioners
- Perspectives of education

### **Dr Martin Collins**

- What makes patients better
- Why does 'practise' work
- And other topics that may interest him

### **Fiona Hamilton:**

- Education
- Attitudinal/emotional perspectives
- Sport.

### **Maria Hayes**

- Paediatrics
- Sports injuries
- Involuntary Motion Studies
- Osteopathic Principles and Concepts

### **Robin Kirk:**

- Patients' perceptions
- Health belief models
- Psycho-social influences
- Health issues influenced by culture, gender, ethnicity etc;
- Historical perspectives
- SAT; TBA.
- Use of language, terminology in healthcare

### **Dawn Limbert**

- Sports care
- Psycho-social issues
- Postural issues
- Osteopathic principles

### **David Lintonbon**

- Rehabilitation
- Osteopathic technique
- Clinical skills
- Structural perspectives of osteopathy
- Quantitative aspects of research

### **Phil Mortimer**

- Biomechanics
- Sports injuries
- Injury prevention

### **Nico Tanguay**

- Osteopathic principles and concepts
- Biomechanics

### **Phyllis Woodfine**

- Repetitive strain injury
- Women's issues in health and illness

## **Other Academic and Research Links**

### **Robin Kirk**

Ex-Editor: *British Osteopathic Journal*  
Past External Examiner: Oxford Brookes University  
Past External Examiner: Pg Dip osteopathy in the cranial field BSO  
Past Involvement in CAM Module Delivery at BSMS  
Present External Examiner: Leeds Metropolitan University  
Ex-Council Member: British Osteopathic Association  
SIOM Lecturer: Psychosocial Concepts Module  
Expert Witness in Medico-legal Cases  
Final Clinical Competences Assessor for GOsC

### **Fiona Hamilton**

Course Leader LSO  
Involvement in CAM Module Delivery at BSMS  
Involvement Module Delivery MSc Physiotherapy, UoB  
Final Clinical Competences Assessor for GOsC  
External Examiner: University of Westminster  
External Examiner: Higher Education & Training Awards Council  
Member: Higher Education Academy

### **Martin Collins**

External Examiner: SIOM, ESO  
Lecturer: ICOM, BSO, OBU

### **Maria Caunce**

External Examiner: Cardiff University, Bangor University  
Course Director: Post-grad Diploma Occupational Therapy, South Bank Uni  
Senior Lecturer In Biomedical Sciences

### **Robert Elliott**

Programme Leader: Biomedical Sciences University of Westminster  
Theme Leader: Health Sciences School of Integrated Health  
External Examiner: University of East London  
Member: Higher Education Academy

## **Annex A**

### **Verity Booth**

*The effects of osteopathy on the performance of agility dogs when used as part of their warm up routine*

### **Jeremy Burton**

*A pilot study into patient expectations and experiences within a private osteopathic practice*

### **Trevor Campbell**

*Does palpatory sensitivity improve with experience and training? A comparative study*

### **Sarah Cartwright**

*A pilot study to investigate the effect of osteopathic techniques on lung function in asthmatics and non asthmatics*

### **Sarah Chambers**

*A study to examine if there is a statistically significant relationship between pain and stress and whether osteopathic intervention can lead to a reduction in pain and stress level*

### **Nicolette Gygi**

*An investigation to determine if high stress levels influence the pressure-pain threshold in myofascial trigger points found in the upper fibres of the trapezius muscle*

### **Mark Hagan**

*A study investigating the commissioning levels of osteopathy by primary care trusts in England: Anticipation of possible future contributions of osteopathy to the NHS*

### **Sue Jones**

*To investigate active stretching versus muscle energy technique to increase hamstring length amongst a group of footballers over a three week period*

### **Daniel Kay**

*The effects of upper thoracic spinal manipulation on the respiratory function of asymptomatic individuals: A cohort study investigating the influence of the sympathetic nervous system*

### **Paul Lacey**

*An investigation into the effects of an osteopathic diaphragm re-doming technique as an adjunct to exercise-based programme scoliotic patients, in affecting respiratory measurements and function.*

### **Greg Lillis**

*An investigation into the relative efficiency of muscle energy technique versus ischemic compression for increasing the resting length of piriformis*

### **Jane Lowrie**

*An investigation into whether certain factors could influence an osteopath's choice of treatment technique, focusing on their gender, experience, training college, clinic environment, patient profiles, patient consultation time.*

***Nisha Matta***

*A study to investigate the association of hamstring injuries and sacro iliac joint dysfunction in track athletes*

***Kevin Nolan***

*A comparison of the effectiveness of direct and indirect muscle energy techniques in increasing the resting length of the Quadriceps muscles in 24 asymptomatic students*

***Benjamin Palmer***

*A study to investigate whether twenty asymptomatic subjects experience a decrease in repositioning errors in the lumbar spine following a series of wobble board practice interventions*

***Jane Regan***

*Fluid intake and reported low back pain in the general population- consideration of a link*

***Margaret Reid***

*An investigation into the effects of osteopathic treatment to the upper thoracic spine (T1 - T5) on cardiovascular and respiratory function*

***Amanda Todd***

*Study into the classification and prevalence of pelvic girdle pain / symphysis pubis dysfunction associated with pregnancy and childbirth*

***Saul Yudelowitz***

*An investigation into the effects of Two Stretching interventions on over pronation of the foot*

**Verity Booth**

**Supervisor: Phyllis Woodfine**

*The effects of osteopathy on the performance of agility dogs when used as part of their warm up routine*

**Abstract**

**Aims**

To determine if osteopathic techniques have a significant difference on agility dogs performance when treated as part of their warm up routine. The study also covered within the literature review other forms of complimentary medicine but for this study two osteopathic techniques (soft tissue manipulation and articulation) were used.

**Design**

Direct comparisons of the time dogs take to run over a set line of jumps both before and after an osteopathic treatment. The twenty dogs were fit, injury and pathology free.

**Null Hypotheses**

Osteopathy will not effect the performance of agility dogs when used as part of their warm up routine.

**Methods**

A brief questionnaire to determine if the dogs were suitable for the trial. Gained consent from dogs Veterinary practitioner. Measurement of time taken to run a simple course pre and post osteopathic treatment.

**Results**

Fourteen out of the twenty dogs improved on their time post treatment. Seven dogs improved on their time after a rest period. Dogs aged 8yrs + and of a smaller size improved significantly.

**Conclusion**

This study showed that osteopathy did not improve the performance of agility dogs when used as part of their warm up routine. The results and the literature indicated that it is a good basis for further research.

**Jeremy Burton**

**Supervisor: Robin Kirk**

*A pilot study into patient expectations and experiences within a private osteopathic practice*

**Abstract**

**Objectives**

This study aims to improve the delivery of osteopathic healthcare by improving the understanding of patients who visit osteopaths; how and why they select an osteopath; their symptoms, their expectations of osteopathic healthcare and which aspects of their consultation they are satisfied with.

**Methods**

100 new and return patients of a private osteopathic practice were invited to participate in this study. A questionnaire was designed to examine the objectives of this study.

**Results**

82 of the 100 email addresses were valid of which 41.46% (n = 34) completed the questionnaire. 47.06% (n = 16) of respondents were male and 52.94% (n = 18) were female. 55.88% (n = 19) of

respondents were aged 30 – 39 and 55.88% (n = 19) belonged to social class I, professional occupations. Patients appeared to select this osteopath because of his reputation for successful treatment outcomes. Patient satisfaction with their experience was high this seems to be due to their expectation of symptom relief being met by the efficacy of their treatment.

**Trevor Campbell**

**Supervisor: Simon Chafer**

*Does palpatory sensitivity improve with experience and training? A comparative study.*

### **Abstract**

#### **Objective**

The primary objective was to investigate the relationship between palpatory sensitivity and osteopathic experience. Secondary objectives were to design a method of objectively assessing static contour palpation and to identify any relationship to age or gender.

#### **Design**

An open group single blinded study was employed. 60 subjects were selected based on the following criteria:

Group A: No clinical osteopathic experience (n=15)

Group B: 50 – 300 hrs clinical osteopathic experience (n=15)

Group C: 600 – 1200 hrs clinical osteopathic experience (n=15)

Group D: >3 years post qualification experienced osteopaths (n=15)

Each subject was asked to palpate through sheets of A4 paper placed on a framework in order to identify the grid position of a paper circle. The experiment was repeated three times and the median score used for analysis.

#### **Results**

Statistically significant results were obtained to support the hypothesis that experience improves palpatory sensitivity ( $p < 0.0001$ ). Age and gender were found not to contribute to palpatory sensitivity.

Evaluation between the groups indicated that palpatory sensitivity improved during the transition between junior student (years 1-3) and senior student (years 4 and 5) but further improvement did not continue post qualification. There was no difference between subjects with no experience and subjects with less than 300 hours experience or between the experienced students and the qualified osteopaths.

#### **Conclusion**

It was concluded that there is a need to improve the objective teaching of palpatory skills and that further research into this area may be critical to the future of the osteopathic profession

**Sarah Cartwright**

**Supervisor: Dawn Limbert**

*A pilot study to investigate the effect of osteopathic techniques on lung function in asthmatics and non asthmatics*

## **Abstract**

**Background:** Osteopathic treatment is regularly cited as having a positive effect in the improvement of asthma. (Brockenhauer *et al* 2002, Guiney *et al* 2005, Hondras *et al* 2005, Stone 2007). The trend of asthma is on the incline and is becoming a global burden (Braman 2006) therefore the potential effects of alternative and complementary therapies should be investigated.

**Objective:** To undertake a detailed investigation on the efficacy of osteopathic techniques on asthmatic patients

**Methods:** Sixty subjects (30 asthmatic, 30 non-asthmatic) were recruited and randomised into one of three groups. A control group, a rib technique group and a diaphragm technique group. Pre and post intervention measurements were taken of FEV<sub>1</sub> and FVC.

**Results:** A significant difference was seen in the rib techniques and the asthmatic group in the FEV<sub>1</sub> measurement (df=9, t=4.31, p<.008) and a significance between time and group in FEV<sub>1</sub> (df=1.54, F=19.23, p<.0001) and FVC (df=1.54, F=6.88, p<.05) which was more significant in the asthmatic group.

**Conclusion:** In adults with asthma, lung function was improved via the use of rib articulations, muscle energy techniques and soft tissue techniques which has an implication for the future of osteopathy in the orthodox primary health care system.

*Sarah Chambers*

**Supervisor: Simon Chafer**

*A study to examine if there is a statistically significant relationship between pain and stress and whether osteopathic intervention can lead to a reduction in pain and stress level*

## **Abstract**

### **Introduction**

It is hypothesised that there is a connection between pain and stress and that osteopathic intervention can reduce these factors. This study was designed to identify if there is a statistical correlation between pain and stress and whether osteopathic treatment can reduce stress and/or pain levels, particularly in those cases where pain cannot be attributed to a neuro-musculoskeletal cause.

### **Method**

This was a questionnaire based survey of new patients at the London School of Osteopathy (LSO) clinic. It examined if there was any statistical relationship between pain and stress immediately prior to or immediately following osteopathic treatment and if osteopathic treatment can reduce pain and stress levels.

### **Results**

A significant correlation was found between patient stress levels pre and post treatment (p<0.0001) and patient pain levels pre and post treatment (p< 0.0077) with a mean improvement in stress levels of 47.69% and a mean improvement in pain levels of 42.7% following treatment. No significant correlation was found between pain levels and stress levels either prior to or following treatment.

### **Conclusion**

This study has established that there is a statistically significant role for osteopathic treatment in reducing pain and stress levels. The lack of statistical significance found between pain and stress levels could have been due to the sample size or data analysis methods. The results have highlighted a potential focus for further research in terms of investigating the effectiveness of osteopathic treatment for certain specific pain disorders and psychological conditions.

*Nicolette Gygi*

**Supervisor: David Lintonbon**

*An investigation to determine if high stress levels influence the pressure-pain threshold in myofascial trigger points found in the upper fibres of the trapezius muscle*

### **Abstract**

#### **Aims and Objectives**

A controlled investigation to determine if a relationship exists between high and low stress levels and the degree of sensitivity (measured via pressure pain threshold) in myofascial trigger points found in the upper fibres of the trapezius muscle in asymptomatic participants.

#### **Methods**

A questionnaire based study, using a self-designed questionnaire modified from The Social Readjustment Rating scale and The Daily Hassle scale, was sent to a random selection of participants at the London School of Osteopathy.

All participants (n=30) were screened for myofascial trigger points, following which their pressure pain threshold measurements for each myofascial trigger point was taken using a manual algometer (model FDK 10) and results recorded. All information was kept strictly confidential.

#### **Conclusion**

Results signify that the Null hypothesis should not be rejected. Therefore this study indicates that there is a weak relationship between the two variables, PPT and Stress which are statistically insignificant ( $r = -0.263$ ). The statistical analysis was conducted using a 95% confidence level.

*Mark Hagan*

**Supervisor: Robin Kirk**

*A study investigating the commissioning levels of osteopathy by primary care trusts in England: Anticipation of possible future contributions of osteopathy to the NHS*

### **Abstract**

This study aimed to provide quantitative data on commissioning levels of osteopathic services by Primary Care Trusts and put these findings into the context of possible future contributions by osteopathy to the National Health Service.

A questionnaire based study was used to draw together information from 152 Primary Care Trusts, 10 GPs and 105 members of the general public.

76% of Primary Care Trusts responded and 19% had commissioned osteopathy in the past. The PCT budgets for osteopathy ranged from £15,096 to £150,000. 28% had advertised services using the 'Any Willing Provider' model in the past twelve months. 60% of public respondents confirmed they had been treated by an osteopath of which 52% confirmed treatment had been 'very effective'. 95% of the general public and 80% of GPs said that osteopathy should be available on the NHS.

One could conclude that osteopathy is not widely available on the National Health Service but significant opportunities should become available to proactive experienced osteopaths in the future. A significant finding was that the public and GPs believed osteopathy should be available on the National Health Service

*Sue Jones*

**Supervisor: Phil Mortimer**

***To investigate active stretching versus muscle energy technique to increase hamstring length amongst a group of footballers over a three week period***

**Abstract**

Objective of this study was to investigate static hamstring stretch versus Muscle Energy Technique during a three week stretching regimen amongst a group of footballers.

**Method**

Thirty two men aged 19 – 36 (mean age 26.7) underwent this study. Pre-measurement tests were carried out for hamstrings stretch using a Sit and Reach box and data recorded. One group participated in a static stretch whilst the other group used a Muscle Energy Technique every day for three weeks, for a period of either 15 or 30 seconds. Both groups performed these activity everyday for 3 weeks. Post-measurements were then recorded

**Results**

There was no significant difference between Active and MET stretching. However, significant improvements in active and MET's were shown in both treatment groups after the three week program. Results also indicated age was a major factor in increasing range of movement compared with the older age group.

**Conclusion**

These findings suggest that both techniques are effective in improving hamstring length but there was no significant difference between the two techniques.

**Daniel Kay**

**Supervisor: Phyllis Woodfine**

***The effects of upper thoracic spinal manipulation on the respiratory function of asymptomatic individuals: A cohort study investigating the influence of the sympathetic nervous system***

**Abstract**

Spinal manipulation is a common manual therapy technique used by osteopaths, chiropractors, and physiotherapists. It is often referred to by osteopaths as a 'high velocity low amplitude thrust' (HVLAT) and is used to achieve analgesic, neurophysiological and mechanical effects. Some authors have suggested that manual therapy can affect the sympathetic nervous system (SNS).

The aim of this study was to analyse whether HVLAT of the upper thoracic spine affects respiratory function in an asymptomatic population.

Randomised, controlled study. 40 healthy volunteers divided into two groups of 20 received either upper thoracic HVLAT or a sham HVLAT. Respiratory function was assessed by spirometry measuring forced expiratory volume in one second (FEV1) and forced vital capacity (FVC).

Results showed no statistically significant change in both FEV1 (P = 0.8100) and FVC (P = 0.5850) after upper thoracic HVLAT or sham HVLAT and no significant difference between the group that received HVLAT and the control group (FEV1, P = 0.5947 & FVC, P = 0.6936).

Conclusions were that upper thoracic spinal manipulation has no significant effect on respiratory function in asymptomatic individuals. Change in SNS function from spinal manipulation would require further investigation measuring respiratory function and other SNS indicators.

**Paul Lacey**

**Supervisor: Mark Bujakowski**

***An investigation into the effects of an osteopathic diaphragm redoming technique as an adjunct to exercise-based programme scoliotic patients, in affecting respiratory measurements and function.***

## **Abstract**

**Objectives:** To investigate the effectiveness of an osteopathic diaphragm re-doming technique as an adjunct to an exercise-based treatment for scoliotic patients, in affecting measurements and respiratory function.

**Methods:** Sixty-five subjects with scoliosis were recruited at the Scoliosis SOS Ltd treatment centre, with 35 forming the test group by receiving a physiotherapist applied diaphragm re-doming technique (DRT) daily on top of the 4-week ScolioGold™ exercise-based treatment programme. A control group of 30 received solely the 4-week ScolioGold™ exercise-based treatment programme.

Quantitative measurements of forced vital capacity (FVC) and ribcage expansion, and qualitative responses from a Shortness of Breath questionnaire (SOBQ) were captured before and after the study.

**Analysis:** Comparison of pre and post measurements between control and test using non-paired t-tests returned no significance difference for FVC ( $p=0.5347$ ) or ribcage expansion at rib 6 ( $p=0.1812$ ) and rib 10 ( $p=0.6985$ ) recorded no significant differences. Level of significance  $p=0.05$ .

**Conclusion:** The null hypothesis states there is no significant difference in respiratory measurement and performance between the test & control group, thus the null hypothesis is accepted.

SOBQ findings indicated a positive effect with participants reporting of reduced affects of dyspnea on activities of daily living (ADLs).

*Greg Lillis*

*Supervisor: Dawn Limbert*

*An investigation into the relative efficiency of muscle energy technique versus ischaemic compression for increasing the resting length of piriformis*

## **Abstract**

### **Aim of Study**

To compare the muscle lengthening effects of muscle energy technique (MET) versus ischaemic compression both immediately after intervention and a week later in order to inform osteopaths in their choice of technique and scheduling of treatment sessions. To explore the influence of gender and dominant laterality (“footedness”) on the effectiveness of these techniques.

### **Method**

Twelve male and 12 female asymptomatic subjects took part. Each subject received MET to one piriformis and ischaemic compression to the other. The dominant laterality (“footedness”) of each subject was recorded. Changes in the resting length of piriformis were inferred using goniometry to measure internal rotation at the hip joint. These changes were measured immediately after intervention and a week later.

### **Findings**

MET produced a significantly larger increase in resting length of piriformis than ischaemic compression immediately after intervention ( $p < 0.001$ ). There was no significant difference between the techniques a week later ( $p = 0.405$ ). Gender and laterality effects were not significant.

### **Conclusion**

MET was significantly more effective in increasing the resting length of piriformis than ischaemic compression immediately after intervention but there was no significant difference between the

techniques a week later. These findings suggest that osteopaths should not choose ischaemic compression to achieve muscle stretch and consider scheduling follow-up treatments less than a week apart. Laterality was not significant. The lack of significant gender effects lends support to the stretch tolerance theory of MET which is not reliant on the viscoelastic properties of muscle in which gender differences have previously been reported.

**Jane Lowrie**

**Supervisor: Robin Kirk**

*An investigation into whether certain factors could influence an osteopath's choice of treatment technique, focusing on their gender, experience, training college, clinic environment, patient profiles, patient consultation time.*

### **Abstract**

There has been concern in some osteopaths about losing traditional osteopathic values in the face of Statutory Self Regulation, (SSR), and the standardisation of osteopathic under-graduate courses. It was felt osteopathy may become less patient-centred and more proscribed in its patient treatment approach ie more like traditional allopathic medicine. It was purported that the traditional osteopathic view of health and disease did not follow that of the conventional medical approach and was not an empirical system with a proscribed plan to an illness.

The intention of this study was to investigate if there was evidence for specialisation with predictive use of osteopathic treatment modalities dependant on such factors as graduation pre and post statutory recognition, practitioner's gender, patient profiles, clinic environment or length of patient consultation times. Statistical analysis was applied to 80 responses from a randomly sampled population of osteopaths. The respondents were subsequently sorted into groups by gender, years qualified, graduating college, employment status, working hours, and number of osteopaths in their practice.

Analysis of the results revealed little evidence for specialisation by osteopaths. Significant differences were found between the genders and the use of STM, ( $p = 0.0034$ ); between BSO and BCOM graduates and the use of NMT/ MET techniques, ( $p = 0.0407$ ); between single and multi-practitioner practices in the use of visceral techniques, ( $p = 0.014$ ). These results were viewed cautiously due to the number of analyses performed and the tendency of contingency table analysis for Type 1 errors.

No other areas of potential were identified as significant, ( $p > 0.05$ ).

**Nisha Matta**

**Supervisor: David Lintonbon**

*A study to investigate the association of hamstring injuries and sacro iliac joint dysfunction in track athletes*

### **Abstract**

A high predisposition of hamstring strains in athletes reported by Cibulka et al (1986) reported to date that sacroiliac joint dysfunction has not been implicated as a cause of hamstring muscle strain.

**Objective:** To determine if there is a possible link between hamstring injuries and SIJD.

**Setting:** Training session for 40 athletes from four main track and field athletic events.

**Design:** Four osteopathic tests were carried out on athletes and observations were recorded by the researcher.

**Main outcome measurements:** Record the frequency of hamstring strains in the athlete and record sacroiliac joint dysfunction osteopathically.

**Key Findings:** The positional findings reported 85% of the athletes who had hamstring dysfunction had an anteriorized inominate. The stork test reported 63% of the athletes who had hamstring strain also had restrictions when performing stork test. The sacral torsion tests reported a 78% deeper angle at the inferior sulcus which may be indicative of hamstring dysfunction. The forward flexion tests

reported 83% of the athletes had excessive nutation which is more likely to occur in people who have tight hamstrings.

**Conclusion:** This project shows that there is a statistically relevant correlation between hamstring injuries and sacroiliac joint dysfunction (SIJD). Osteopathic tests to determine SIJD are extremely significant and athlete's who present with SIJD may be predisposing to hamstring muscle strain.

**Kevin Nolan**

**Supervisor: Maria Hayes**

*A comparison of the effectiveness of direct and indirect muscle energy techniques in increasing the resting length of the Quadriceps muscles in 24 asymptomatic students*

### **Abstract**

This research project focused on the relative efficacies of the Muscle Energy Technique (MET) variants known as direct and indirect. The study focused on the techniques' ability to stretch muscle and associated connective tissue elements, specifically allowing an increase in range of motion and resting length.

The study compared the ability of the two techniques to increase the resting length of the 'Quadriceps' group of muscles in 24 asymptomatic students at the London School of Osteopathy, aged between twenty-five and fifty years.

The literature suggests that currently the direct and indirect forms of MET are used to treat chronic and acute presentations respectively. The main aim of this project was to support or refute this approach to treatment, leading to a more informed approach to patient care. Measurements were taken, using a standard goniometer, with the subject supine and performing active knee flexion, both pre and post test.

The results showed that the mean increase in range of motion was 8.083° and 5.208° for direct and indirect respectively. This increase, of 2.875°, was shown to represent a significant difference using a paired 't' test. Consequently the null hypothesis (H0) was rejected in favour of the alternative hypothesis (H1). These findings support the current use of indirect and direct MET in acute and chronic settings respectively.

**Benjamin Palmer**

**Supervisor: Dawn Limbert**

*A study to investigate whether twenty asymptomatic subjects experience a decrease in repositioning errors in the lumbar spine following a series of wobble board practice interventions*

### **Abstract**

#### Objective

This study was conducted to investigate whether twenty asymptomatic subjects would experience a decrease in repositioning errors in the lumbar spine following a series of wobble board practice interventions.

#### Summary of background information

Although a deficit in proprioception is commonly associated with individuals who have lower back pain (LBP) and proprioception exercises have often been incorporated into rehabilitation programmes for these individuals, research into the effectiveness of proprioception exercise, is limited.

#### Method

Repositioning errors were recorded using a Myovision Inclinometer (MI) device on three separate occasions. Twice before receiving wobble board exercise interventions, and once after receiving eight wobble board practice interventions. For MI measurement, subjects were asked to remember their upright position before being guided into a flexed lumbar position of 40 degrees and asked to remember this position. They returned to the original upright posture and were asked to replicate the previous angle of inclination. This was repeated three times and the mean repositioning error was recorded for the upright and inclined positions.

### Results

The repositioning error data for the before and after wobble board conditions was tested for significant difference using the Wilcoxon matched-pairs ranked-sum T test, with  $P > 0.10$ . The analysis found that wobble board exercises did not significantly decrease repositioning errors for the sample in the upright ( $P = 0.2943$ ) or inclined ( $P = 0.1956$ ) positions.

### Conclusion

The subjects in this study didn't experience a reduction in repositioning errors after wobble board interventions, which suggests they didn't gain an improvement in their lumbar spine proprioception. The lack of statistical significance could have been due to discrepancies in the sample, repositioning error equipment or data analysis methods.

**Jane Regan**

**Supervisor: Fiona Hamilton**

### *Fluid intake and reported low back pain in the general population- consideration of a link*

#### **Abstract**

This study investigates the consumption of water and all fluids in the general population and relates this activity with the incidence of low back pain.

Anecdotal evidence exists to suggest that advising patients to drink more water will improve the outcomes in treatment of low back pain. This is of importance to Osteopaths as many patients seek treatment for this condition. However there is very little referenced material to support this claim.

A review of the available literature does reveal the importance of water for many metabolic functions in a healthy body, including the functioning of the disks in the low back. It also reveals the body's own homeostatic ability to regulate this and to trigger the desire to drink when needed.

A questionnaire based study was designed to test the hypothesis that there is a relationship between the volume of water consumed and positive health outcomes, including those relating to low back pain.

The study revealed that there was little statistical significance in the responding population to support the prescribing of water in aftercare advice. What was of most significance was the Body Mass Index of the patient. This has implications for the aftercare advice given to patients. Weight loss advice would be of more benefit than advice to drink more water.

**Margaret Reid**

**Supervisor: Simon Chafer**

### *An investigation into the effects of osteopathic treatment to the upper thoracic spine (T1 - T5) on cardiovascular and respiratory function*

## **Abstract**

The purpose of this study was to investigate the effects of osteopathic treatment to the upper thoracic spine (T1-T5) on cardiovascular and respiratory function. Twenty-two subjects participated in the study where a within subjects design was employed to examine the effects of soft tissue manipulation, articulation and a control condition of no treatment on heart rate, systolic and diastolic blood pressure and respiration rate. Paired t-tests were used for the intra-treatment analysis and results showed that soft tissue manipulation significantly decreased heart rate ( $p=0.02$ ) and significantly increased diastolic blood pressure ( $p=0.04$ ). Respiration rate was very significantly reduced ( $p<0.01$ ) with no treatment. ANOVA with Bonferroni adjustment was used for inter-treatment comparison and results showed that the control condition of no treatment was significantly better than soft tissue manipulation in reducing systolic blood pressure ( $p=0.017$ ) and respiratory rate ( $p=0.016$ ).

These findings provide the basis for future research and have implications for our understanding of the effects of manipulative osteopathic techniques on cardiovascular and respiratory function.

**Amanda Todd**

**Supervisor: Phyllis Woodfine**

*Study into the classification and prevalence of pelvic girdle pain / symphysis pubis dysfunction associated with pregnancy and childbirth*

## **Abstract**

### **Background**

Whilst there is a significant amount of literature regarding pelvic girdle pain in the obstetric and gynaecological professions, there is very little literature with respect to the role of osteopathy in the treatment and management of the condition.

### **Objectives**

This study aims to review the literature in respect to the classification and prevalence of pelvic girdle pain associated with pregnancy and childbirth. It is also the intention of this study to identify the current advice and treatment modalities and propose that Osteopathy has a significant role to play in this domain.

### **Method**

This was a questionnaire based study. Forty subjects responded to questionnaires, of those, thirty met the inclusion criteria. Responses were analysed using validated approaches to qualitative research.

### **Results**

A significant observation was made between rates of incidence pregnancy related pelvic girdle pain and Polycystic Ovarian Syndrome. An overwhelming number of respondents also expressed that osteopathic treatment was beneficial and that they would recommend it.

### **Conclusion**

This study demonstrated support for the findings of previous research (Wu *et al* 2004). 93% of respondents found osteopathic treatment to be beneficial for their pregnancy related pelvic pain. This study highlights the paucity of osteopathic research in this field and strongly recommends the need for further research

**Saul Yudelowitz**

**Supervisor: Fiona Hamilton**

## *An investigation into the effects of Two Stretching interventions on over pronation of the foot*

### **Abstract**

Stretching plays a significant part in a rehabilitation program designed by manual therapists for the treatment of injuries to the foot (Sharkey, 2004). According to Christensen<sup>a</sup> (1984) over 70% of patients over pronate. Given the scope and significance that the foot function has on the biomechanics of the body, it is important to study and analyse any dysfunction that occurs from over pronation of the foot. The purpose of this study was to investigate the affect of two different stretching methods on foot over pronation, namely the Standard method and the Alternative method. A randomised cross over trial of 40 subjects, 28 male and 12 female, with an average age of 43 years was analysed over an 8-week period. Each subject was treated with the Standard Stretching method over a 4 week period and the Alternative Stretching method for the other 4 week period. Measurements for each subject were taken at the start of the study to assess the extent of their pronation and thereafter twice a week after stretching. Pronation was assessed by drawing a line down the subject's leg, along the Achilles tendon to the heel, and calculating the angle this line creates with the floor. The ideal measurement would be when this line forms a 90 degree angle with the floor (perpendicular). The key findings of the investigation were that the Standard method seemed less effective at reducing pronation, while the Alternative method showed significantly better results. Statistical analysis concluded that the Alternative Stretch produced better results with respect to reducing over pronation of the foot, with a statistical significance of  $p = 0.001$

Surrey Institute of Osteopathic Medicine

# Annual Report on Research

January 2010

## ***Review of Research Activity at SIOM***

### **Historical context**

The current final year student's BSc degree is validated by the Open University. The requirement for this validation is that students submit a research proposal on a topic related to osteopathy to demonstrate their understanding of the research process. A list of proposed topics can be found at the end of this report.

Following revalidation with the University of Surrey, the next cohort of students will be completing a full dissertation at either BSc or M(Ost) level. To support the students with this and to create a more stable, cohesive department, there has been a major restructuring within SIOM, with the creation of a number of new posts at group tutor, clinic coordinator and assistant head of department level.

Siom is fortunate in that it is part of a large FE/HE education establishment (Nescot) with the ability to use research facilities within the college and also to access specialist support for research projects in the future.

Carolyn Felton continues to be SIOM's representative on NCOR. She has commenced a PhD in osteoarchaeology at the University of Southampton.

### **SIOM M(Ost) course**

The first cohort of students are about to embark on their journey to achieve an M(Ost) degree in January 2012. The course is validated by the University of Surrey. The introduction of this course is due to the high caliber of recent cohorts at SIOM and a commitment to introduce high level research training at the college.

### **2009 Student Research Proposal Titles**

The clinical and economic relevance of treating plagiocephaly by manual therapy in infancy

Are Muscle Energy techniques applies to the posterior calf muscles and effective form of treatment for young adult males suffering from plantar fasciitis?

The evaluation of the most clinically efficient treatment of adolescent idiopathic scoliosis

The nature, prevalence and manifestation of Reiter's Syndrome in the under 25's, a descriptive study

Can osteopathic medicine provide an effective system of treatment in the management of piriformis syndrome

The effectiveness of muscle energy techniques to latissimus dorsi muscle in the treatment of contra lateral sacro-iliac joint pain

An examination of the effect of articular techniques at C2/3 on the effect and severity of

cervicogenic headaches

The use of manual techniques used to inhibit the diaphragm; the evidence

The use of classical osteopathic techniques in improving the effectiveness of pelvic floor exercises on stress urinary incontinence in females

A case study of the effects of muscle energy techniques on a cerebral palsy patient

The efficacy of osteopathic treatment in preventing relapse of club foot in children above 24 months after the use of the Ponseti Method.

## FINANCIAL STATEMENT

1<sup>st</sup> October, 2008 to 30<sup>th</sup> September, 2009

### INCOME

April 2009	£32, 842.00
August, 2009	£32, 842.00
Total income for the period	£65,684.00

### EXPENDITURE

#### Salaries

Administration Support (S Mathias)	£4,834.00
Carol Fawkes - Research Officer (0.8FTE)	£32,352.00
Liz Lance – Research Officer (0.6FTE from September 2009)	£1,500.00

#### Travel Costs

GOsC Conferences and NCOR business	£4,106.00
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Telephone and postage	£3,000.00
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<b>TOTAL EXPENDITURE</b>	<b>£45,872.00</b>
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<b>BALANCE</b>	<b>£19,812.00</b>
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*A large remaining balance appears on this financial statement due to the fact that there is a 5 month time-lag between when Carol Fawkes was appointed and the NCOR budget began. The appointment of Liz Lance in September 2009 also means that 5 months' salary is currently being carried forward.*

***Background to the development of the National Council for Osteopathic Research (NCOR) and the draft strategic plan for osteopathic research, 2003.***

The National Council for Osteopathic Research was constituted in 2003 in order to explore and assure the place that osteopathy has to play in Healthcare. The Council was established by the General Osteopathic Council, the British Osteopathic Association and all the recognised teaching colleges within the United Kingdom.

A chairman for the National Council for Osteopathic Research was appointed on 1<sup>st</sup> March, 2003 (Professor Ann Moore). Briefly the role of Chairman includes the following:

1. Chair and lead meetings of NCOR.
2. Work with stakeholders to establish the research mission and objectives of NCOR.
3. Lead NCOR towards achieving its mission.
4. Facilitate contact and liaise with funding bodies, government departments, foundations, Healthcare councils, research councils and institutes of Higher Education.

The National Council for Osteopathic Research has met regularly since March, 2003 to discuss its operation but its first major task has been to produce a draft five-year strategic plan for the development of osteopathic research within the United Kingdom. Rather than a prescriptive and directive plan, the strategy constitutes a framework within which osteopathic research can develop and flourish.

***The Development of the Strategic Plan***

In order to seek views on research from the osteopathic profession a questionnaire was circulated to regional and special interest groups as well as members of the National Council for Osteopathic Research. The responses to the questionnaire were analysed descriptively and thematically. The responses to the questionnaire were used to inform a Strategic Planning Event which took place in October 2003.

***Aims of the Strategic Planning Event***

The Strategic Planning Event aimed to achieve the following:

1. To establish a vision statement summarising what it is hoped can be achieved in five years in terms of osteopathic research development.
2. To establish a set of mission statements for the National Council for Osteopathic Research which will contribute to the attainment of the vision for the future.
3. To identify five main strategic areas for development by the National Council for Osteopathic Research.
4. To identify goals for each of the identified strategic areas.
5. To develop action plans for each of the identified goals.

A further aim was to identify any infrastructure needing to be put in place in order to support the action plans described.

## **Vision Statement for osteopathic research for the next five years (2003 – 2008)**

The development of a profession-wide research culture which is inclusive, robust, credible, has national and increasingly international impact and benefits for osteopathic teaching, learning and patient care.

### **Mission Statements, 2003**

1. To establish and develop a comprehensive information resource for osteopathic research in order to promote a mutual research dialogue within the osteopathic profession and with other related professions.
2. To create a forum that will develop and nurture a pan-professional osteopathic research culture, facilitate linkage of research to practice and identify national research priorities.
3. To develop a research governance framework and code of good practice in research for osteopathy which links with frameworks already developed by the National Health Service and the Research Funding Councils.
4. To increase and improve the profile of osteopathic research at national and international levels with policy makers, HEIs, the NHS and fund-holders.
5. To increase collaboration in research amongst osteopathic providers and HEIs nationally and with like minded researchers internationally to improve the teaching, learning and research nexus and the quality of osteopathic research generally.
6. To improve the quality and quantity of research outputs.
7. To develop appropriate channels for research dissemination e.g. websites, journals, etc.
8. To identify and nurture sources of funding for research activities.

## Constitution of National Council for Osteopathic Research

Chair	Professor Ann Moore
The British College of Osteopathic Medicine (BCOM)	Dr Nick Walters Succeeded in May, 2005 by Dr Heather Hinkley currently represented by Dr Simon Dyall
British Osteopathic Association (BOA)	Mr Michael Watson
The British School of Osteopathy (BSO)	Ms Kate Nash, succeeded in June, 2005 by Dr Martin Collins; succeeded in 2006 by Mr Steven Vogel, Head of Research
The College of Osteopaths (COET)	Dr Janine Leach, succeeded in 2009 by Dr Julie Thompson
The European School of Osteopathy	Dr Peter Collins succeeded in March, 2005 by Mrs Brenda Mullinger
General Osteopathic Council (GOsC)	Ms Brigid Tucker Mr Vince Cullen, succeeded in December 2009 by Ms Fiona Browne
The London College of Osteopathic Medicine	Dr Roderic MacDonald
The London School of Osteopathy	Mr Robin Kirk (represented since 2009 by Mr Mark Bujikowski)
NHS Practitioners' Representative	Mr Martin Pendry
Private Practitioners' Representative	Mr Tim McClune
Oxford Brookes University	Mr Jorge Esteves – resigned 2009 to take up new post. Oxford Brookes University is currently unrepresented on NCOR
Surrey Institute of Osteopathic Medicine (SIOM)	Ms Reena Joshi, succeeded in 2009 by Mrs Carolyn Felton
Co-opted member	Dr Janine Leach
Research Officer	Carol Fawkes
Research Officer (appointed September, 2009)	Liz Lance