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“Implementing an assessment to Osteopathy
students on transferable knowledge skills from
Case Studies research to their clinical practice”:
- A Pilot Study-

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• A brief Introduction to our ITS

- ITS has been open since 1996, providing courses of Osteopathy for health professionals (physiotherapists, nurses, medical doctors, manual therapists, etc), as well as courses for those without a background in manual therapy or in the medical field.
- These courses have been taught under the guidance of Dr. Borges de Sousa (the founder of this school) and between 1998 and 2005 in association with Oxford Brookes University.
- The team of lecturers came from England, France and from our own school.
- We are and always have been a trustful Osteopathy Institution and the largest of its type in Portugal.
- The infra-Structures are all concentrated in one building with practical rooms, and theory rooms, a library and a clinic centre.

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• The Clinic Centre

- The Clinic Centre provides the future osteopaths the opportunity of assessing and treating real patients before getting into their clinical jobs.
- All students start their clinic experience from the 1st year of their studies (with observation of their senior colleagues)
- We do not charge for the treatments aiming this way to help those who can not afford osteopathic treatment and equally to guarantee a reasonable amount of patients to each student.
- We have 8 individual rooms and we see up to 48 patients per day.
- Sessions last 90 mins for new patients and 60 mins for follow up appointments, with permanent supervision of a tutor.

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• Objectives we aim to achieve with this Pilot Research Project

- To initiate a research department in ITS
- To introduce scientific research based on Case Studies in the clinical routine of the final years Osteopathic students
- To evaluate the importance of these Case Studies in the students' research and scientific competences and their ability to transfers them to the clinical practice.
- Furthermore we would like to use these Case Studies in our lectures to be analysed and discussed by a wide population of students

Case Studies

Case Studies

Case Studies are considered to be of great value for educational purposes as they provide important clinical information based on a valuable real clinical case

(Brodell RT, 2000)

Case Studies

Case Studies can:

- Describe a diagnosis or a therapeutic Dilemma
- Address adverse reactions to treatment
- Suggest changes in diagnosis and prognosis
- Explore unusual and interesting clinical cases

Although the lowest in the hierarchy of evidence, Case Studies are considered by the practitioners to provide a great deal of important clinical information.

(Brodell RT, 2000)

Case Studies

Hierarchy of Evidence

- Systematic Reviews
- Meta-analysis
- Randomised controlled trials (RCTs)
- Non randomised controlled trials
- Cohort Studies
- Case-Control Studies
- Audit of case series
- Case Studies

(Brodell RT, 2000)

Case Studies

Structure of Case Studies

• **Preparation stages:**

- Identify a suitable patient
- Search literature for similar cases
- Obtain consent from patient
- Obtain information about the patient's case history, examinations and tests

(Brodell RT, 2000)

Case Studies

Structure of Case Studies

• **Items to be included in the Case Study:**

- Introduction
- Case report:
 - History
 - Examination
 - Examination findings
 - Investigation
 - Results of investigation
 - Treatment intervention used
 - Outcome of treatment
- Discussion
- Conclusion
- References
- Acknowledgment
- Additional information

(Brodell RT, 2000)

Case studies

- The Case Studies research will be based on patients presenting with unusual complaints within the muscle skeletal and neurological context with important clinical interest.
- Each student will be encouraged to complete one Case Study over their final year Clinical discipline.

Research Methods

Why in Undergraduate level?

- Osteopathic students have difficult in understanding research information (Cruzer et al 2009).
- Osteopathic researchers are not increasing in the desire number, and scientific evidence is essential for the development of the profession (Pheley et al 2006).
- Research training is necessary in Osteopathic Schools (Pheley et al 2006).
- Integrating research skills in undergraduate education can be crucial to stimulate students to implementing evidence research in their clinical practice.

Skills to develop for the Research

- How to search information / literature
 - Databases (Medline, Cochrane, PEDRO, PubMed)
- How to critical appraisal information

(Licciardone J 2008)

Searching Literature

- Focus in the major databases
- Search strategies
 - MeSH terms, keywords, search features (truncation words), limiting variables (title)
 - Boolean Search
- PICO question (Foster et al 2001)

Critical Appraisal – Basic Principles

- Types of design
- Types of studies
- Methodology
 - Question, population, randomization, blinding, sample, measurement, outcome.
- Data
 - Qualitative and quantitative

(Sim and Wright 2000)

Methodology

Study Design

- A descriptive survey design, using anonymous questionnaire to collect quantitative data.

Participants

- Final year Osteopathic students:
 - Acquired knowledge in Research Methods
 - Finished a case study (oral and writing presentation)

Measurement

- Students will be invited to fill a anonymous questionnaire with the objective to evaluate perceived levels of competence in transferable knowledge skills and in research skills.
- This evaluation is based in a questionnaire adapted from the Centre for Excellence in Teaching and Learning in Applied Undergraduate Research Skills at Reading University, which is being used and adapted by different authors.

(Burgoyne et al 2010)

Measurement

Transferable skills items:

- Communication- writing
- Communication- oral
- Information gathering
- Information evaluation
- Work independently
- Project management
- Time management
- Problem solving

(Burgoyne et al 2010)

Measurement

• Questionnaire

(adapted from the Centre for Excellence in Teaching and Learning in Applied Undergraduate Research Skills at Reading University)

- 8 items to be assessed
- 10 point rating scale from low competence to high competence
- This questionnaire has good internal consistency – 0.89 Cronbach alpha coefficient

(Burgoyne et al 2010)

Data Analysis

- Descriptive statistic will be reported through mean and by bar chart
- Cut point of 5 will be used to group the results of each skill into high or low levels of competence achieved

References

- Burgoyne L, O'Flynn S, Boylan G 2010 Undergraduate medical research: the student perspective. Medical Education Online 15: 5212
- Cruser A, Dubin B, Brown S, Bakken L, Licciardone J, Podawiltz A, Bulik R 2009 Biomedical research competencies for osteopathic medical students. Osteopathic Medicine and Primary Care 3:10
- Foster N, Barlas P, Chesterton L, Wong J 2001 Critically appraised topics (CATS). One method of facilitating evidence-based practice in physiotherapy. Physiotherapy 87: 179-190
- John C. Licciardone 2008 Educating osteopaths to be researchers – What role should research methods and statistics have in na undergraduate curriculum? International Journal of Osteopathic Medicine 11: 62-68
- Pheley A, Lois H, Strobl J 2006 Interests in research electives amongst Osteopathic Medical Students. JAOA 106- 11
- Sim J, Wright C 2000 Research in Health Care – Concepts, designs and methods. Stanley Thornes Ltd, Cheltenham



Thank You