

Valutazione della preparazione percepita e soddisfazione nell'ambiente formativo tra gli studenti di osteopatia in Europa: lo studio PreSS.



Learning environment, preparedness and satisfaction in osteopathy in Europe: The PreSS study.

Emanuele Luciani MSt., BSc in physiotherapy

Francesco Cerritelli MSc, DO, MPH

Patrick L.S. van Dun MSc, DO

Jorge Eduardo Esteves PhD, MA in Education, BSc Ost

Christian Lunghi DO

Marco Petracca DO, BSc physiotherapy

Liria Papa DO

Oliver Merdy DO

Anne Jakel DPhil, BSc(Hons) Ost

Introduzione

- ▶ Moltissimi studi in ambito formativo nelle materie sanitarie ma in ambito osteopatico...



New Graduates' Preparedness to Practise

Research Report
of a study commissioned by the
General Osteopathic Council

Prof Della Freeth
Dr Paul McIntosh
Dr Dawn Carnes

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Correspondence to: Prof Della Freeth, d.freeth@qmul.ac.uk
Institute of Health Sciences Education, Barts and The London School of Medicine and Dentistry, Queen Mary University London, Garrod Building (315), Turner Street, London E1 2AD

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Osteopathic student satisfaction and preparedness to practice: A comparative study

Emanuele Luciani ^{a,*}, Francesco Cerritelli ^b, Mark Waters ^a,
Rafael Zegarra-Parodi ^c

^aBritish School of Osteopathy, 275 Borough High Street, London SE1 1JZ, United Kingdom

^bAccademia Italiana Osteopatia Tradizionale Research Institute, Via Prati 29, Pescara 65124, Italy

^cPrivate Practice, 7 Rue Georges VIII, 75116 Paris, France

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KEYWORDS
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Abstract Background: Osteopathy is now taught across the world, but each school has different teaching and learning strategies that may influence the preparedness of students for practice in different ways.

Objective: To investigate levels of the satisfaction with the learning environment and the preparedness to practise from the perspective of osteopathic students.

The study compares full-time schools in three different countries to analyse relationships between learning environment and preparedness.

Method: A web-based questionnaire using a five-point Likert scale (strongly agree, agree, uncertain, disagree, strongly disagree) was sent by e-mail to all final year students of the British School of Osteopathy (BSO-UK), Accademia Italiana Osteopatia Tradizionale (AIOT-Italy) and Centre Européen d'Enseignement Supérieur de l'Ostéopathe (CEESO-France).

Results: The response rate was 58% for the BSO (n = 51), 100% for the AIOT (n = 12) and 80% for the CEESO (n = 43). The AIOT students perceived a better learning environment than CEESO and BSO students, while CEESO students felt more prepared than AIOT and BSO students. Statistically significant associations were found between learning environment and preparedness.

* Corresponding author. Via Romagna 17, 00187 Roma, Italy. Tel.: +39 3488977681.
E-mail address: Emanuele_Luciani@yahoo.it (E. Luciani).
URL: <http://www.osteofstoluciani.com>

RESEARCH ARTICLE

Open Access

The DREEM, part 1: measurement of the educational environment in an osteopathy teaching program

Brett Vaughan^{1,2*}, Annie Carter^{1†}, Chris Macfarlane^{1†} and Tracy Morrison^{1†}

Abstract

Background: Measurement of the educational environment has become more common in health professional education programs. Information gained from these investigations can be used to implement and measure changes to the curricula, educational delivery and the physical environment. A number of questionnaires exist to measure the educational environment, and the most commonly utilised of these is the Dundee Ready Educational Environment Measure (DREEM).

Methods: The DREEM was administered to students in all year levels of the osteopathy program at Victoria University (VU), Melbourne, Australia. Students also completed a demographic survey. Inferential and correlational statistics were employed to investigate the educational environment based on the scores obtained from the DREEM.

Results: A response rate of 90% was achieved. The mean total DREEM score was 135.37 (+/- 19.33) with the scores ranging from 72 to 179. Some subscales and items demonstrated differences for gender, clinical phase, age and whether the student was in receipt of a government allowance.

Conclusions: There are a number of areas in the program that are performing well, and some aspects that could be improved. Overall students rated the VU osteopathy program as more positive than negative. The information obtained in the present study has identified areas for improvement and will enable the program leaders to facilitate changes. It will also provide other educational institutions with data on which they can make comparisons with their own programs.

Background

The educational environment has been studied across the entire spectrum from primary through to tertiary level, and even beyond to post-graduate training. Components of the educational environment include, but are not limited to: the physical infrastructure such as rooms for lectures, tutorials and clinical activities; facilitating and constraining factors for learning; the atmosphere created by fellow students; and faculty including teaching, clinical and administrative staff [1,2]. For an excellent discourse on the concepts and issues around the educational environment see Genn [3,4] who points out the environment created by a program impacts student behaviour i.e.

approach to study [4,5], understanding of practice [6] and the educational outcomes achieved [3,7].

Understanding an educational program environment can assist with quality assurance by identifying where a program can be improved, and subsequently evaluating changes that are implemented [3,8,9]. Within health professional education, measurement of the environment has received some attention exploring particularly the impact on educational outcomes. Although not based on any specific educational theory [1], numerous measures of the educational environment in health professional programs have been published [10]. The most commonly utilised measure is the Dundee Ready Education Environment Measure (DREEM) [11]. Previous work by Brown et al. [12] utilised the DREEM to assess the educational environment within the allied health programs at a single Australian university (Monash University, Melbourne). These authors demonstrated a small range in total DREEM scores from

* Correspondence: brett.vaughan@vut.edu.au

† Equal contributors

¹College of Health & Biomedicine, Victoria University, Melbourne, Australia

²Institute of Sport, Exercise and Active Living, Victoria University, Melbourne, Australia



Introduzione 2

- ▶ Influenza dell'ambiente formativo sulla preparazione percepita (Cave et al.,2007; Tokuda et al.,2010).
- ▶ Ridotta preparazione associata a un aumento dello stress nel periodo di transizione. (Hummell et al.,1999; Brennan et al.,2010).
- ▶ Standard simili tra le varie nazioni (WHO, OSEAN, FORE)
- ▶ Migliorare il programma accademico attraverso anche scambi internazionali (Processo di Bologna).
- ▶ Salvaguardia del paziente

Scopo dello studio

- ▶ 1) Verificare il grado di soddisfazione degli studenti verso il proprio **ambiente formativo** e verso la propria **preparazione**.
- ▶ 2) **Confrontare i risultati** tra istituti dove l'osteopatia è riconosciuta e dove non è riconosciuta
- ▶ 3) Valutare la **correlazione** tra ambiente formativo e preparazione percepita.

Materiali e metodi 2

Criteri di inclusione:

- ▶ Istituti di osteopatia a tempo pieno europei
- ▶ Studenti all'ultimo anno di osteopatia

Criteri di esclusione:

- ▶ Istituti part-time
- ▶ Studenti non all'ultimo anno di osteopatia

Materiali e metodi 2

Distribuito giugno 2014:

- ▶ Questionario demografico (età, sesso, precedente esperienza in campo sanitario)
- ▶ Dundee Ready Educational Environment Measure (DREEM), 50 domande divise in 5 sottocategorie.
 1. SPL (Students' Perception of Learning) Percezione degli studenti dell'insegnamento
 2. SPT (Students' Perception of Teachers) Percezione degli studenti verso gli insegnanti
 3. SASP (Students' Academic Self-Perception) Percezione degli studenti verso la preparazione accademica
 4. SPA (Students' Perception of Atmosphere) Percezione degli studenti dell'atmosfera
 5. SSSP (Students' Social Self-Perception) Percezione degli studenti della vita sociale
- ▶ Association of American Medical College (AAMC), 7 domande
- ▶ Conoscenza clinica, conoscenza base e management delle condizioni più comuni, abilità comunicativa, decisione clinica, etica e professionalità.

Materiali e metodi 3

- ▶ Media, deviazione standard, errore standard della media con intervallo di confidenza 95%
- ▶ Valutazione della distribuzione normale dei dati è stata fatta utilizzando Brown-Forsythe Levene test
- ▶ Cronbach's alpha per valutare consistenza interna del DREEM
- ▶ Test di stabilità con R di Pearson
- ▶ Comparazione tra scuole del DREEM e AAMC con ANOVA
- ▶ Chi-quadrato test per differenze tra nazioni riconosciute e non.
- ▶ Analisi multivariata lineare per la correlazione DREEM e AAMC
- ▶ Programma per analisi statistiche è stato R v3.1.2.
- ▶ $P < 0.05$ sono stati considerati per la soglia di significatività

Risultati



Risultati 2

► Partecipanti

Studenti a tempo pieno dell'ultimo semestre dell'ultimo anno (N=243)

► Scuole europee di osteopatia a tempo pieno (N=9)



ESO: European School of Osteopathy, Maidstone, Inghilterra

BSO: British School of Osteopathy, London, Inghilterra

IdHEO: Institut des Hautes Etudes Ostéopathiques, Orvault, Francia

ULB: Université Libre de Bruxelles, Brussels, Belgio

SC: Sutherland College, Amsterdam, Olanda

CROMON: Centro Ricerche Olistiche per la Medicina Osteopatica e Naturale, RM, Italia

CERDO: Centre pour l'Etude, la Recherche et la Diffusion Osteopathiques, RM, Italia

ICOM: International College of Osteopathic Medicine, MI, Italia

AIOT: Accademia Italiana Osteopatia Tradizionale, PE, Italia

Risultati 3

Institutions	BSO (n=75)	ESO (n=44)	IdHEO (n=39)	ULB (n=14)	SC (n=16)	AIOT (n=10)	CROMON (n=13)	CERDO (n=12)	ICOM (n=20)
Response rate	75/90 83%	44/60 73%	39/61 64%	14/19 74%	16/20 80%	10/10 100%	13/14 93%	12/15 80%	20/25 80%
Gender *									
Male	39(52.0)	23(52.3)	13(33.3)	6(42.9)	8(50.0)	7 (70.0)	4(30.8)	6(50.0)	10(50.0)
Female	36(48.0)	21(47.8)	26(66.7)	8(57.1)	8(50.0)	3 (30.0)	9(69.2)	6(50.0)	10(50.0)
Age §	27.3 (0.4)	28.4(0.5)	25.3(0.3)	24.9(0.5)	28.3(0.8)	23.7 (0.3)	25.6(1.5)	25.5(0.6)	24.9(0.3)
Previous experience*									
Yes	33(44.0)	22(50.0)	9(23.1)	12(85.7)	7(43.8)	0 (0.0)	2(15.4)	1(8.3)	3(15.0)
No	42(56.0)	22(50.0)	30(76.9)	2(14.3)	9(56.2)	10 (100.0)	11(84.6)	11(91.7)	17(85.0)

General characteristics of the study population. * N (%), § mean (±SEM).

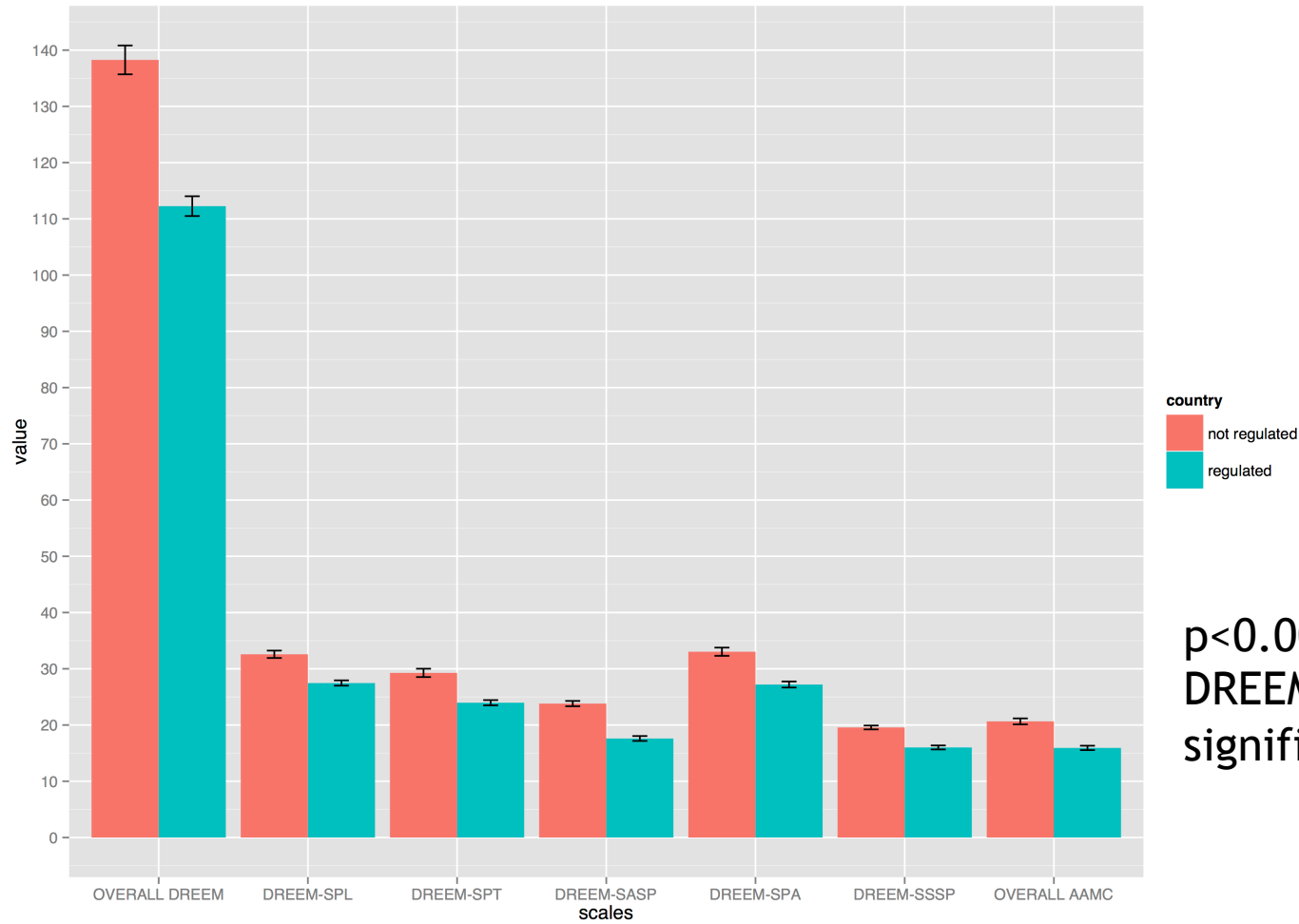
Risultati 4

Overall DREEM score	Interpretation
0-50	Very poor
51-100	Plenty of problems
101-150	More positive than negative
151-200	Excellent

Questionnaire	BSO (n=75)	ESO (n=44)	IdHEO (n=39)	ULB (n=14)	SC (n=16)	AIOT (n=10)	CROMON (n=13)	CERDO (n=12)	ICOM (n=20)
DREEM Overall score	105.3 (1.6)	108.8 (3.5)	129.4 (3.9)	133.0 (6.8)	149.9 (3.4)	140.9 (7.6)	149.8 (4.1)	124.8 (8.5)	131.8 (5.3)
SPL	27.4 (0.5)	25.4 (1.0)	30.0 (1.0)	31.0 (1.6)	34.9 (1.0)	33.2 (1.9)	35.3 (1.1)	30.3 (2.3)	31.1 (1.5)
SPT	22.0 (0.6)	24.5 (0.9)	27.3 (0.9)	26.9 (2.3)	32.5 (0.9)	29.4 (2.5)	32.2 (1.3)	25.9 (2.3)	28.4 (1.4)
SASP	16.7 (0.6)	16.0 (0.8)	21.2 (0.8)	23.6 (1.1)	24.0 (0.9)	24.5 (1.6)	26.1 (1.2)	21.2 (1.1)	23.6 (1.0)
SPA	24.9 (0.6)	26.6 (1.0)	32.3 (1.0)	31.9 (1.9)	37.7 (0.9)	33.2 (1.9)	35.7 (1.1)	28.9 (2.5)	30.8 (1.5)
SSSP	14.4 (0.4)	16.4 (0.6)	18.7 (0.7)	19.6 (0.8)	20.9 (0.5)	20.6 (1.0)	20.5 (0.7)	18.4 (1.1)	18.1 (0.8)
AAMC Overall score	14.7 (0.5)	15.6 (0.7)	18.6 (0.9)	20.1 (1.4)	21.4 (0.6)	21.3 (1.8)	22.9 (1.0)	16.8 (1.5)	21.0 (1.2)

Questions	Items	Max score	Interpretation
Students' perception of learning (SPL)	12	48	0-12 Very Poor 13-24 Teaching is viewed negatively 25-36 A more positive perception 37-48 Teaching highly thought of
Students' Perception of teachers (SPT)	11	44	0-11 Abysmal 12-22 In need of some retraining 23-33 Moving in the right direction 34-44 Model Teachers
Students' academic self-perceptions (SASP)	8	32	0-8 Feelings of total failure 9-16 Many negative aspects 17-24 Feeling more on the positive side 25-32 Confident
Students' perception of atmosphere (SPA)	12	48	0-12 A terrible environment 13-24 There are many issues which need changing 25-36 A more positive atmosphere 37-48 A good feeling overall
Students' social self-perceptions (SSSP)	7	28	0-7 Miserable 8-14 Not a nice place 15-21 Not too bad 22-28 Very good socially

Risultati 5



$p < 0.001$
DREEM e AAMC
significativo

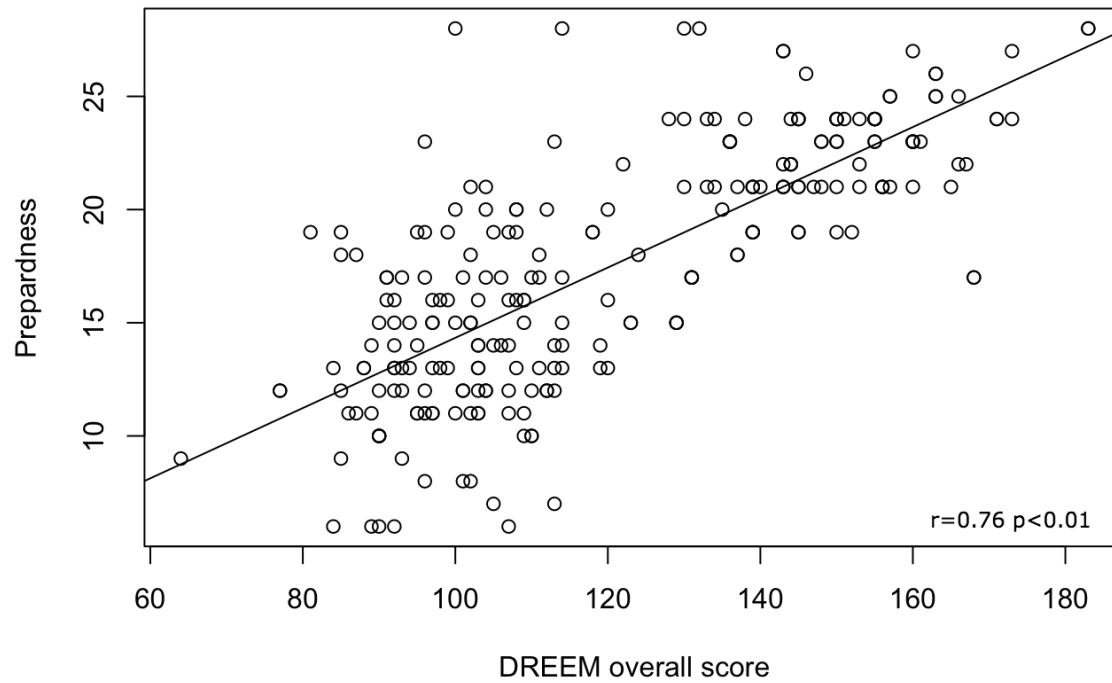
Riconosciute = BSO, ESO, IdHEO
Non riconosciute = AIOT, CERDO, SC, ICOM, ULB

Risultati 6

	Overall DREEM score			SPL			SPT			SASP			SPA			SSSP			AAMC		
	B	95% CI	p< t	B	95% CI	p< t	B	95% CI	p< t	B	95% CI	p< t	B	95% CI	p< t	B	95% CI	p< t	B	95% CI	p< t
Female	8.12	2.29; 13.96	<0.001	1.03	-0.52; 2.58	0.19	1.79	0.17; 3.40	0.03	1.77	0.44; 3.09	<0.01	2.10	0.35; 3.85	0.02	1.44	0.39; 2.49	<0.01	1.57	0.30; 2.83	<0.01
Regulated Country	-24.56	-30.65; -18.47	<0.001	-4.73	-6.35; -3.11	<0.001	-4.99	-6.68; -3.30	<0.001	-5.99	-7.37; -4.61	<0.001	-5.53	-7.36; -3.70	<0.001	-3.33	-4.42; -2.23	<0.001	-4.44	-5.76; -3.11	<0.001
Age	0.11	-1.11; 1.32	0.86	0.02	-0.31; 0.34	0.93	0.03	-0.30; 0.37	0.86	0.05	-0.23; 0.32	0.74	-0.001	-0.37; 0.36	0.99	0.02	-0.20; 0.23	0.89	-0.12	-0.39; 0.14	0.36
No previous experience	5.63	-2.65; 13.90	0.18	1.58	-0.62; 3.78	0.16	1.27	-1.01; 3.57	0.27	0.96	-0.92; 2.83	0.32	0.97	-1.51; 3.46	0.44	0.84	-0.65; 2.33	0.27	0.14	-1.66; 1.93	0.88

Analisi multivariata lineare

Risultati 7



Correlazione lineare

Discussione

- ▶ DREEM totale compreso tra 105 e 149.9 «previous comparative studies ranged from 95 to 137 for medical schools (Tokuda et al.,2010) and from 133 to 143 for obstetrics and gynaecology undergraduates (Varma et al.,2005)». Ambiente formativo valutato «**più positivo che negativo**» in tutte le scuole reclutate.
- ▶ Classi con meno di 20 studenti hanno una performance migliore. Stewart et al. (1997) «*osteopathy student cohorts with **fewer than 20 students scored significantly higher** compared to larger cohorts, this may be attributed to a better interaction between students as well as between students and teachers* »
- ▶ C'è una **correlazione** tra ambiente formativo e preparazione percepita (Luciani et al.,2014; Tokuda et al.,2010;Cave et al.,2007).
- ▶ L'ambiente formativo e la preparazione percepita è risultata migliore nelle scuole dove **l'osteopatia non è riconosciuta**.

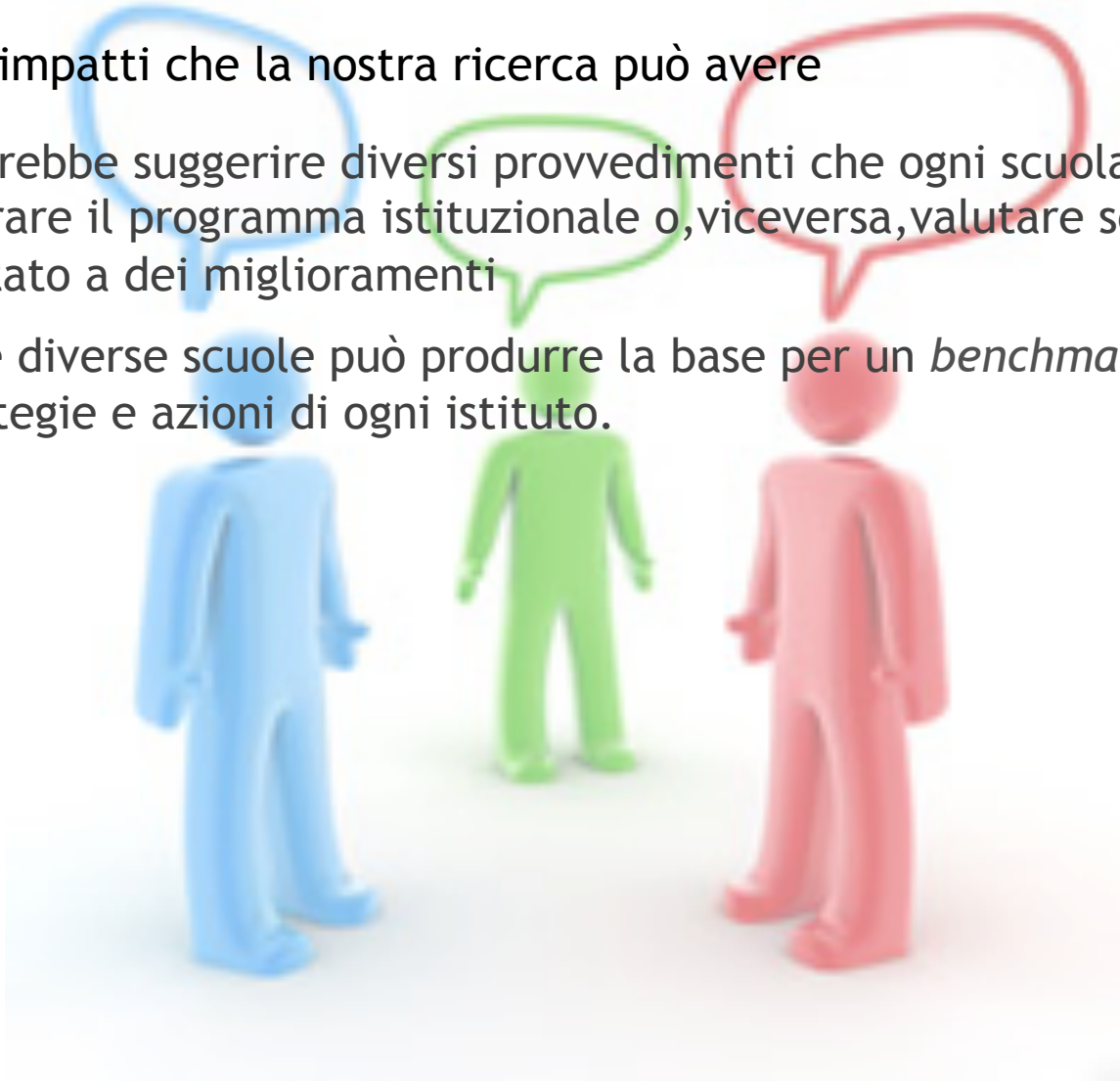
Discussione2

- ▶ Perché la preparazione percepita è più alta nelle nazioni dove l'osteopatia non è riconosciuta?
- ▶ «*British Effect*»?
- ▶ Migliore capacità di critica da parte degli studenti? «*osteopathic education in the UK prepares students to critically appraise available evidence and professional knowledge; it does nonetheless raise their expectations and make them more critically aware of deficiencies in their education. Therefore, students may be more likely to critically reflect on their existing competence profile and consider it inadequate for autonomous clinical practice*» (Luciani et al., 2015, article in press)
- ▶ Scuole private più attente allo studente?

Impatto

Alcuni dei impatti che la nostra ricerca può avere

- ▶ DREEM potrebbe suggerire diversi provvedimenti che ogni scuola potrebbe prendere per migliorare il programma istituzionale o,viceversa, valutare se i provvedimenti presi hanno portato a dei miglioramenti
- ▶ Comparare diverse scuole può produrre la base per un *benchmark*, migliorando la policy, strategie e azioni di ogni istituto.



Punti di forza e limitazioni

- + Il più ampio studio in osteopatia in ambito formativo (9 scuole, 5 nazioni europee), fornendo un *insight* dell'osteopatia in Europa
- + Alta percentuale di risposte (64% a 100%)
- I questionari auto-compilati risultano avere una poca validità interna (Jones et al., 2002; Davies et al., 2006) «veridicità delle risposte degli studenti»? Evans et al., 2002: “*self-assessment is a fundamental skill that should be introduced into both undergraduate and postgraduate education*” as doctors may lack training in how it should be executed (Luciani et al., 2014).
- Soddisfazione percepita limitata all'ultimo semestre?

E in futuro?



- ▶ Differenze tra istituti pubblici e privati
- ▶ Tipologia di insegnamento (PBL or problem solving)
- ▶ Trend dal primo all'ultimo anno
- ▶ Produrre evidenze per aiutare a riconoscere l'osteopatia in quelle nazioni dove non lo è
- ▶ Follow up ad un anno sulla preparazione percepita

Conclusione

- ▶ Soddisfazione verso l'istituto e preparazione percepita sono state valutate dagli studenti simili o superiori nelle nazioni dove l'osteopatia non è riconosciuta.
- ▶ In generale tutti gli istituti rientrano in un ambito «più positivo che negativo», ma comunque ci sono ancora ampi margini di miglioramento.
- ▶ C'è una correlazione positiva tra l'ambiente formativo e la preparazione percepita dagli studenti.

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Domande?

