A Survey of the Management and Classification of Patients presenting with Neck Pain to Osteopathic and Physiotherapy Practices

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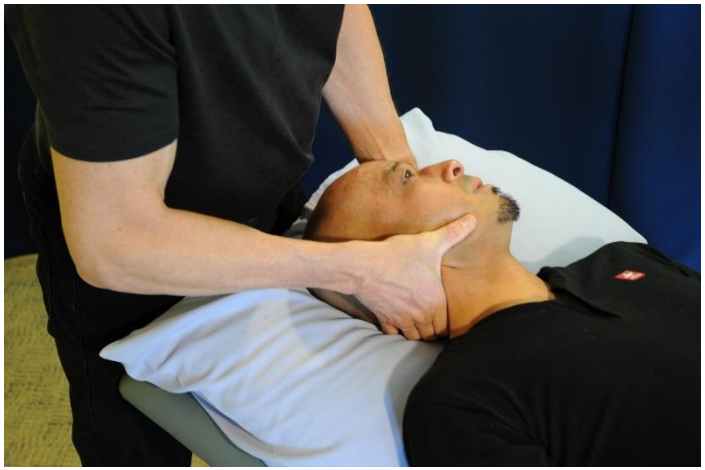
Introduction

- Neck pain is becoming an increasingly costly burden in the general population and often associated with considerable functional disability (Hoving et al., 2004), and is
- It is one of the most common complaints among working age women (Pierre Cote et al., 2008; Hoy, Protani, De, & Buchbinder, 2010).



Current Guideline - recommendations

- Multimodal approach in management of patients with non-specific neck pain (Guzman et al 2008)
- Strong evidence in support of the use of cervical manipulation and mobilisation for reducing neck pain, cervicogenic headache, and disability (Childs et al 2008)
- Pragmatic multimodal approach incorporating the use of manipulation, exercise, and soft-tissue for patients with non-specific neck pain (Bryans et al 2014)
- Little is known about how professions like Physiotherapy and Osteopathy are adhering to guidelines or are managing patients based on treatment classification in NZ and Australia

Purpose

- To investigate the management approaches of Australian and New Zealand osteopaths and physiotherapists in relation to patients presenting with neck pain.
- To investigate whether osteopaths and physiotherapists are sub-grouping their patients in a manner consistent with a treatment-based classification model in the management of patients with neck pain.
- To investigate whether the techniques applied by osteopaths and physiotherapists to patients with neck pain were in alignment with best-practice guidelines or current best-evidence.

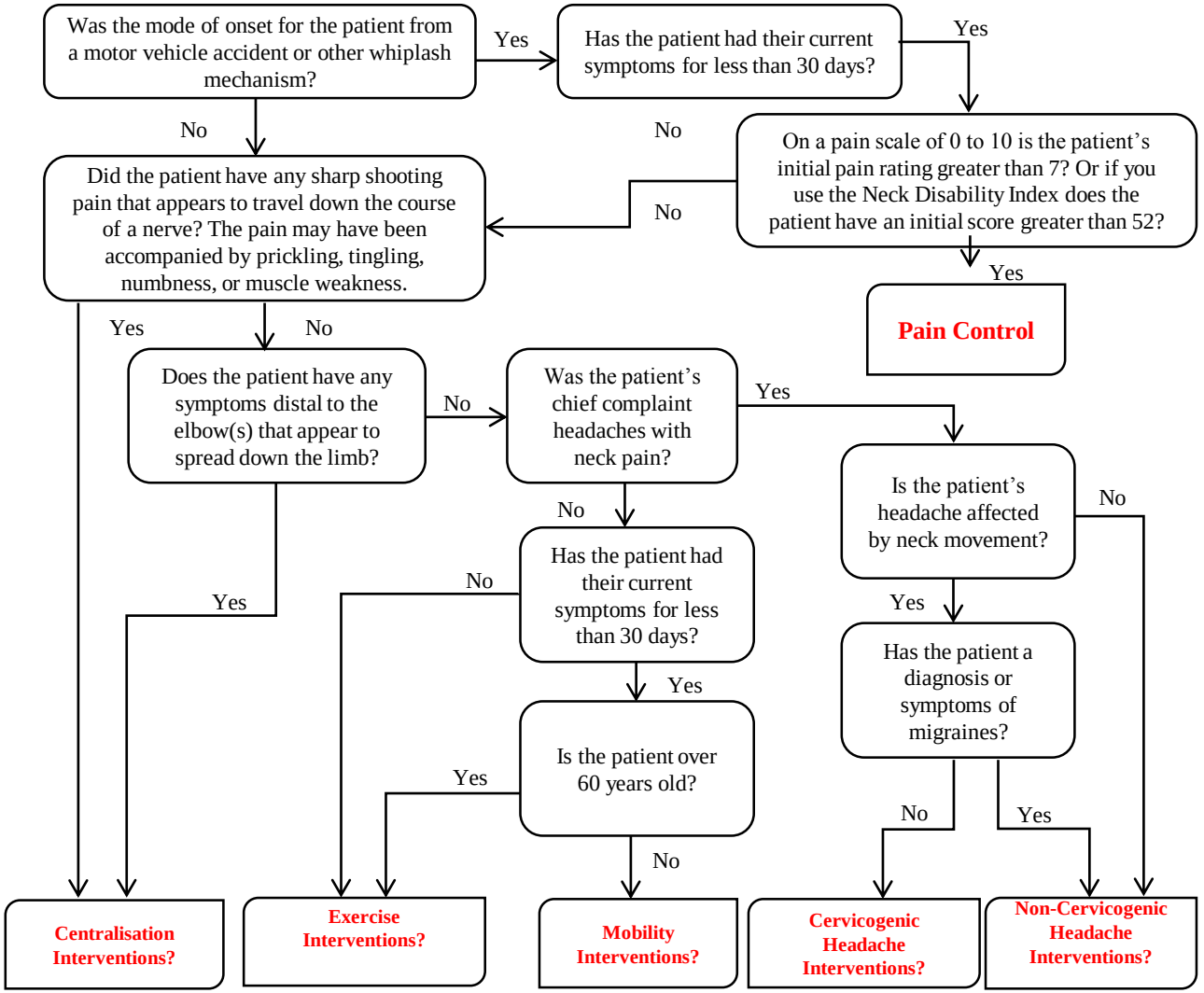
Methods

- A questionnaire algorithm was developed and administered online to survey the management practices of patients with neck pain by osteopaths and physiotherapists
- Data collection was conducted from September 2012 to April 2013.

Professional Body or Association	Number of Registrants / Members
Osteopathic Council of New Zealand	386
Australian Osteopathic Association	1300
New Zealand Manipulative Physiotherapists Association	410
Musculoskeletal Physiotherapy Australia	2073

- The practitioner assessed the patient then entered their diagnostic classification into survey monkey
- They were blinded to the classification subgroup – the algorithm the would place their intervention data into one of five subgroups as per Fritz and Brennan's algorithm (2007).

Methods



Fritz and Brennan (2007)

Methods Treatment grouping

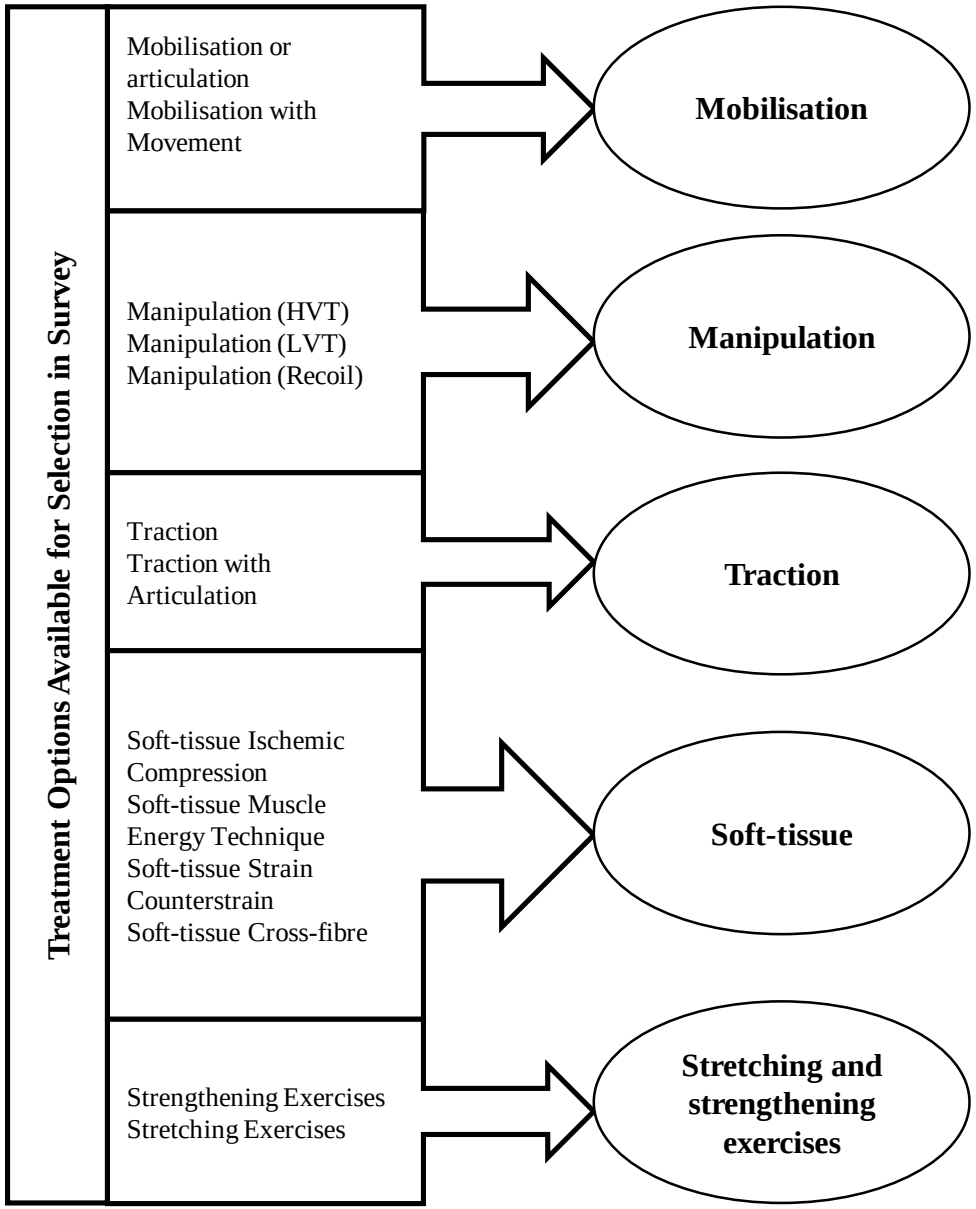


Figure 1 Amalgamation of Treatment Options

Statistics

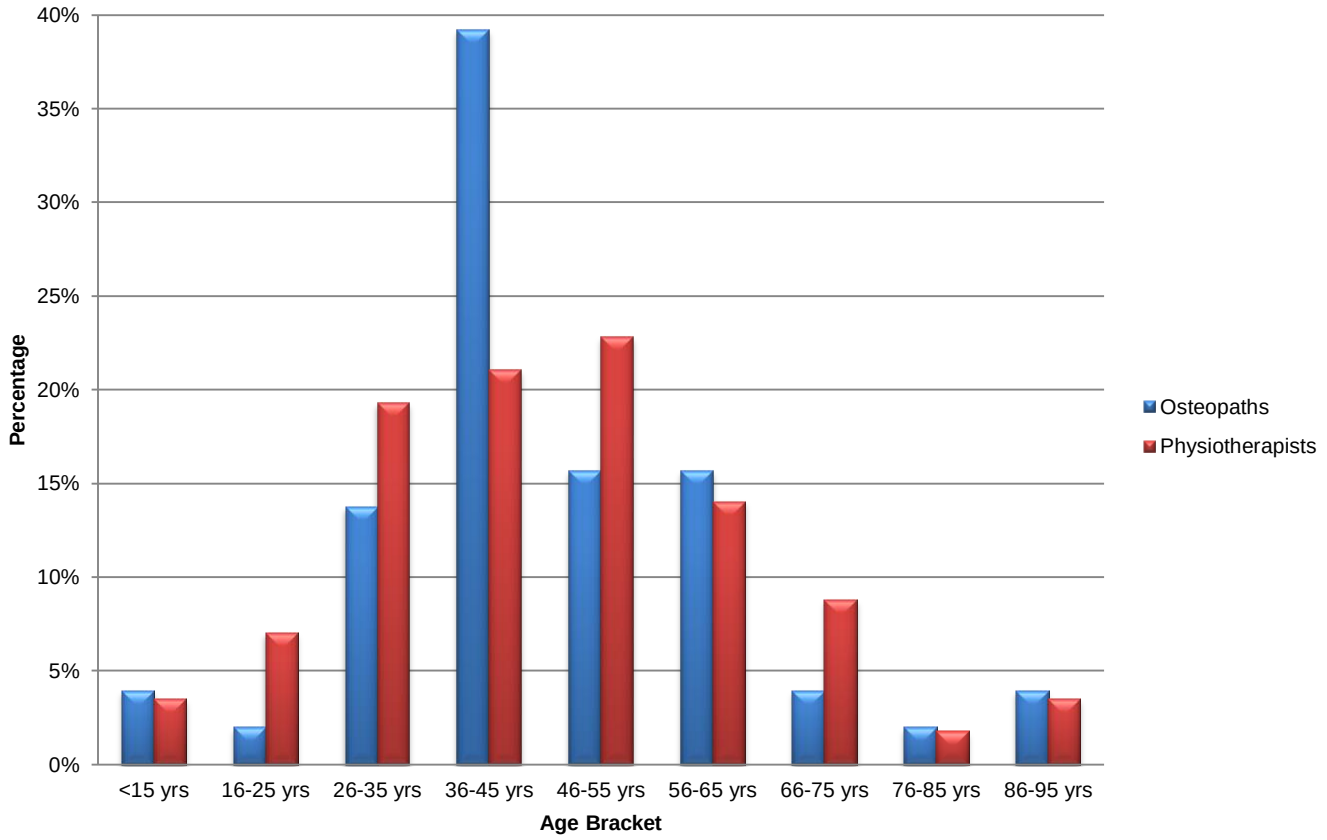
- Descriptive analysis
- Chi Squared and Odd ratios

Results -demographics

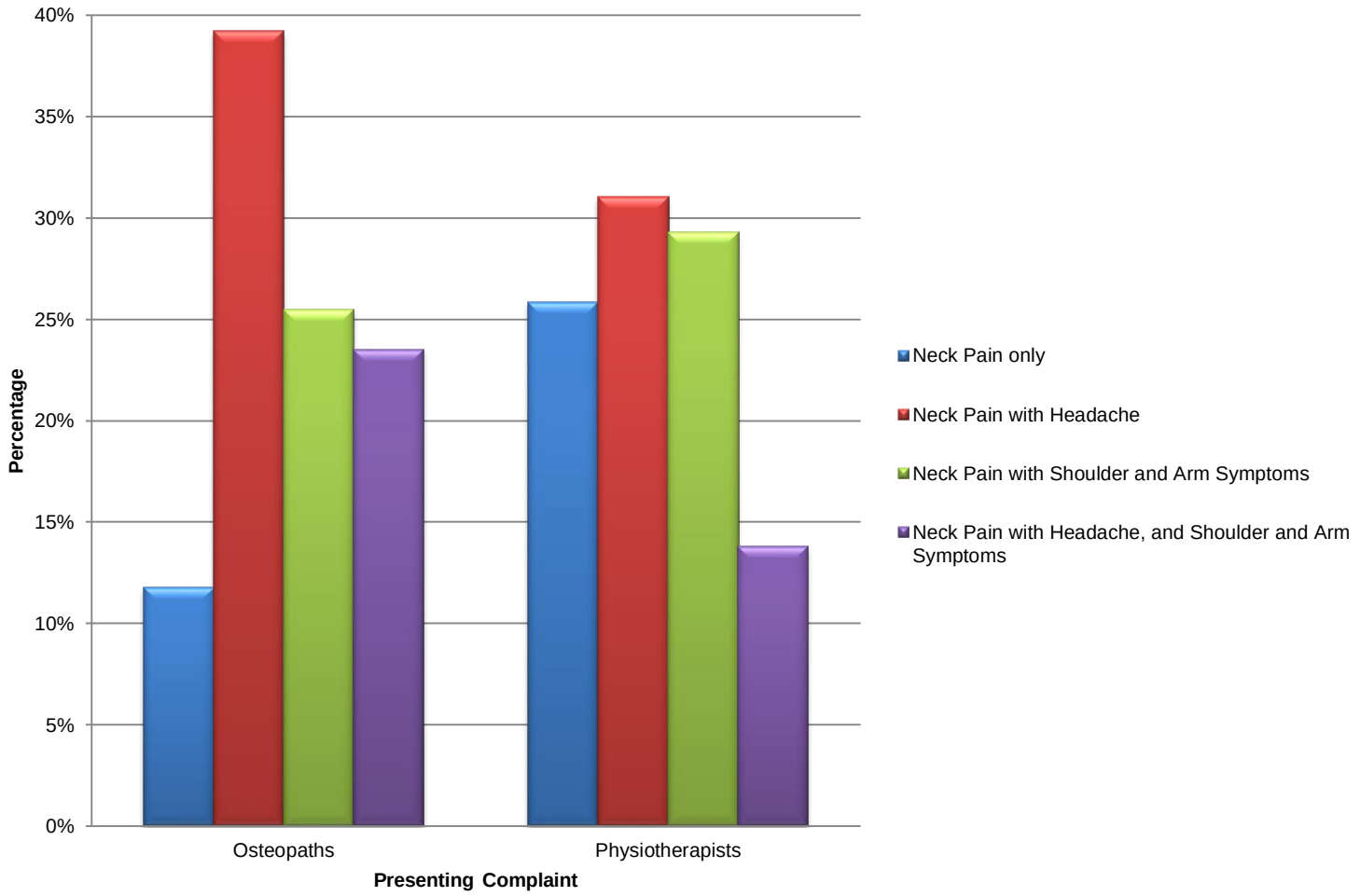
- Response rate- osteopaths was 1.5% and for physiotherapists 0.9%

Practitioner Information		Osteopaths	Physiotherapists	All Respondents
Location	New Zealand	13	12	52%
	Australia	12	6	38%
	Other	1	4	10%
Gender	Female	12	13	52%
	Male	14	9	48%
Years in Practice	<5 yrs	2	0	
	6-10 yrs	5	4	
	11-15 yrs	5	3	
	16-20 yrs	1	0	
	21-30 yrs	1	1	
	>31 yrs	2	3	

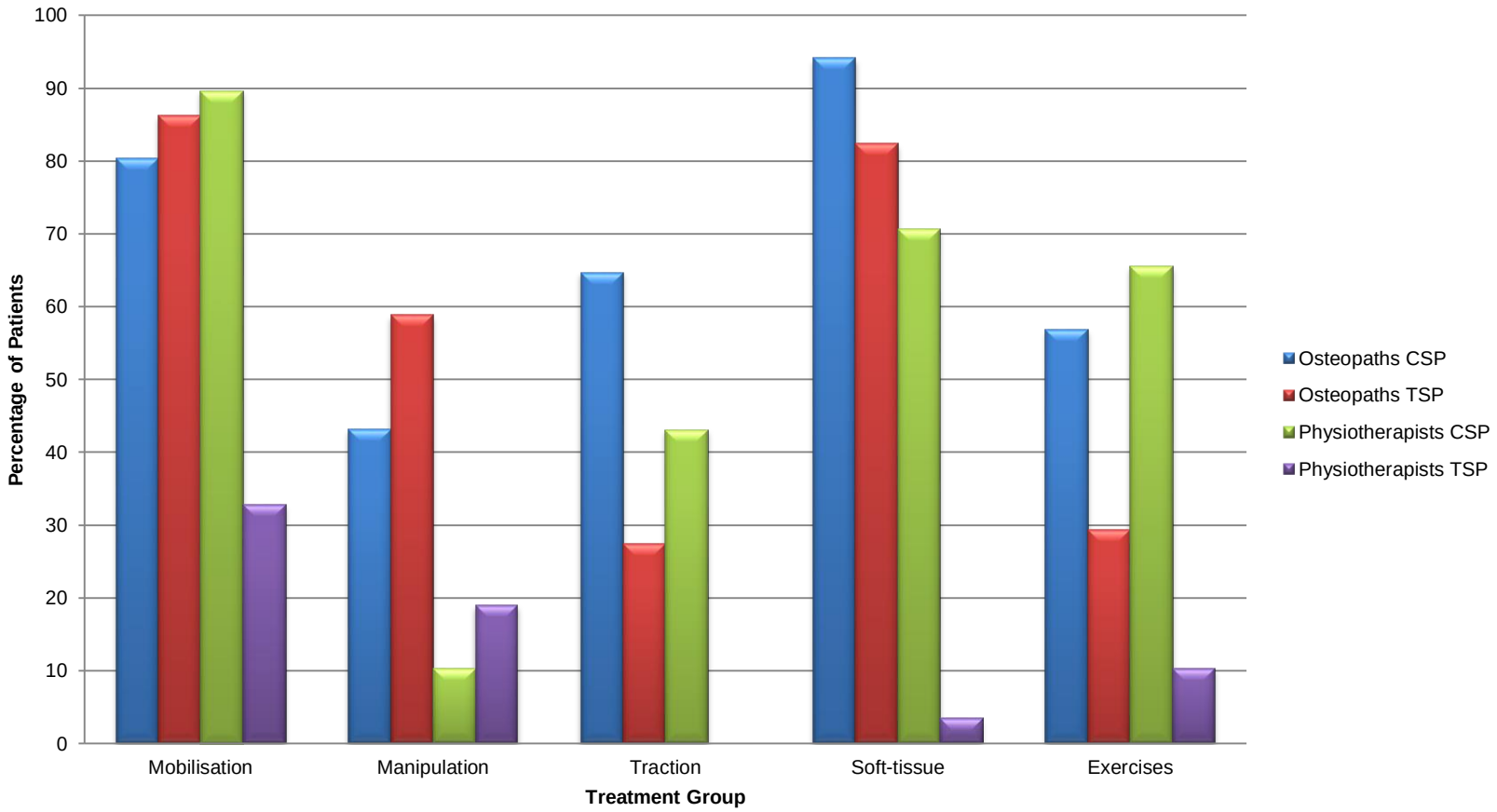
Results – patient demographics



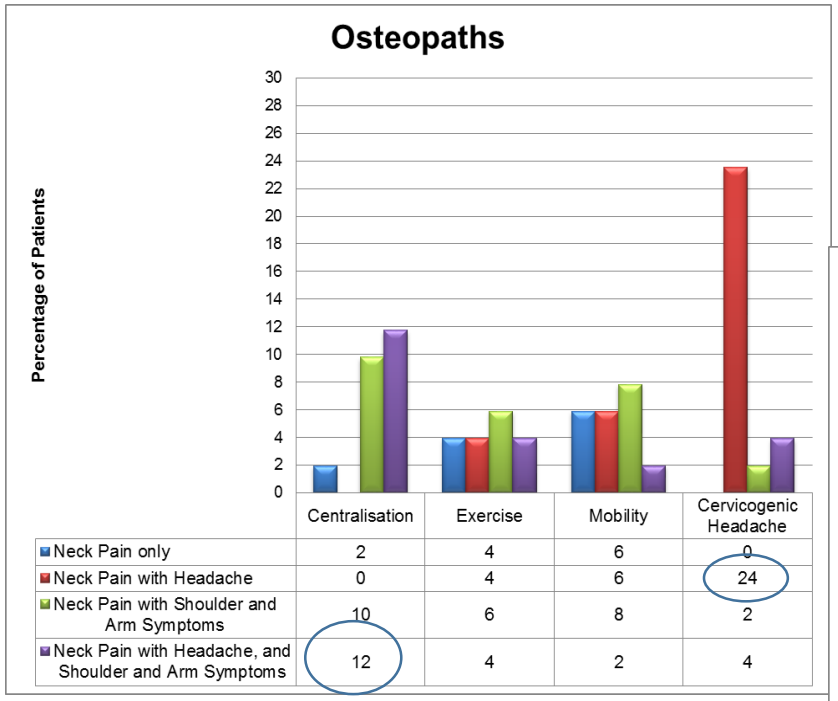
Results-Percentage distribution of patients by presenting complaint as determined by therapist



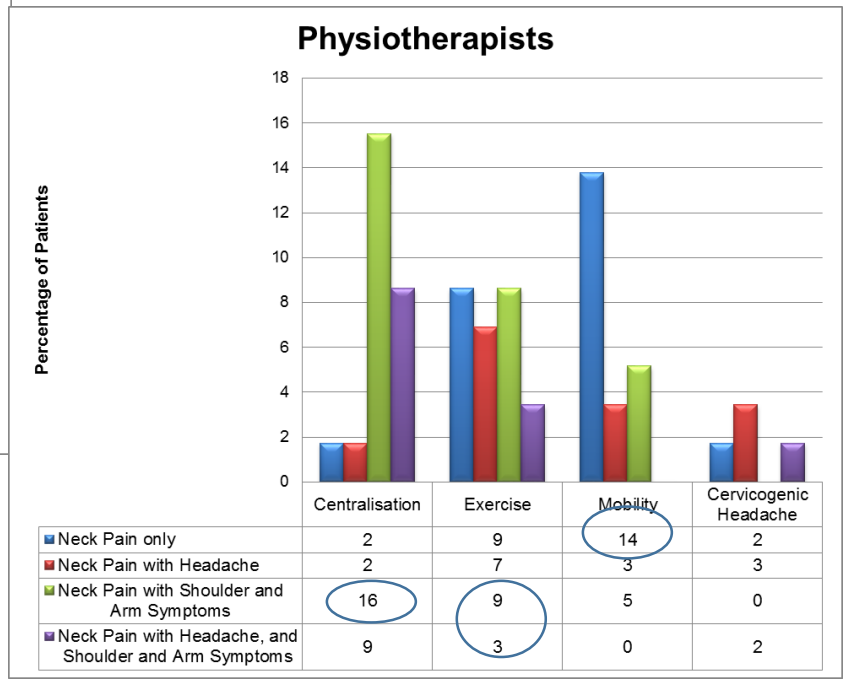
Results – Percentage distribution of patients by treatment received in each anatomical region



The presenting complaint assignment vs TBC subgroups



	Centralisation	Exercise	Mobility	Cervicogenic Headache
Neck Pain only	2	4	6	0
Neck Pain with Headache	0	4	6	24
Neck Pain with Shoulder and Arm Symptoms	10	6	8	2
Neck Pain with Headache, and Shoulder and Arm Symptoms	12	4	2	4



	Centralisation	Exercise	Mobility	Cervicogenic Headache
Neck Pain only	2	9	14	2
Neck Pain with Headache	2	7	3	3
Neck Pain with Shoulder and Arm Symptoms	16	9	5	0
Neck Pain with Headache, and Shoulder and Arm Symptoms	9	3	0	2

Results Technique

- Osteopaths were 13 times more likely to apply thoracic mobilisation ($p<0.01$), were 130 times more likely to address the thoracic region with soft-tissue interventions ($p<0.01$), and were 2 times and 22 times more likely to apply traction to the cervical and thoracic regions respectively ($p<0.05$).
- Osteopaths were 4 times more likely to address the thoracic region with stretching and strengthening exercise interventions ($p<0.05$).
- Osteopaths were 7 times and 6 times more likely to utilise cervical and thoracic manipulation respectively ($p<0.01$).
- For mobilisation, physiotherapists were 2 times more likely to apply cervical mobilisation ($p<0.05$).

Matched interventions

- Cervicogenic Headache subgroup
  - Osteopaths were 20 times more likely to apply thoracic mobilisation ($p<0.05$)
- Mobility subgroup
  - Osteopaths were 23 times more likely to apply thoracic mobilisation, 3 times more likely to apply thoracic manipulation, and 7 times more likely to utilise thoracic stretching and strengthening exercises ($p<0.05$)
  - In the mobility subgroup physiotherapists were 7 times more likely to apply thoracic mobilisation ($p<0.05$)
- Exercise subgroup
  - Osteopaths were 53 times more likely to apply thoracic soft-tissue ($p<0.05$)
- Centralisation subgroup
  - Osteopaths were 4 times more likely to apply cervical traction, and 33 times more likely to apply thoracic mobilisation ($p<0.05$)

Discussion

- In relation to the question: what approaches do Australian and New Zealand osteopaths and physiotherapists apply in relation to patients presenting with neck pain?
    - Osteopaths applied a more regional approach when addressing the treatment of patients presenting with neck pain.
    - Both disciplines utilised a multimodal style of care – including mobilisation, soft-tissue, and stretching and strengthening exercises.
    - Consistent with the guidelines

Discussion

- Are osteopaths and physiotherapists sub-grouping their patients in a manner consistent with a treatment-based classification model in the management of patients with neck pain?
  - The results of this study indicate that practitioners were not employing interventions in groupings that are consistent with those of a treatment-based classification system suggested in the literature.
  - There was a lack of obvious cohesive groupings of interventions in relation the subgroups of ‘Centralisation’, ‘Exercise’, ‘Mobility’ and ‘Cervicogenic Headache’.

Discussion

- To investigate whether the techniques applied by osteopaths and physiotherapists to patients with neck pain were in alignment with best-practice guidelines or current best-evidence.
- Regional application of interventions
- Multimodal approach
- Research-practice gap

Conclusion

- This study highlights that differences exist in the utilisation of interventions between osteopaths and physiotherapists.
- The practice patterns demonstrated by this study suggest that osteopaths and physiotherapists utilise a multimodal approach to the management of patients presenting with neck pain employing a range of interventions widely supported in the literature.
- Practitioners were not subgrouping their patients along the lines of a known classification system.

Questions