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# Low back pain-related beliefs and self-reported practice behaviours among final-year cross-discipline health students

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Department of Health

## Background and Aim

Clinicians' beliefs related to low back pain (LBP) influence patient outcomes<sup>1</sup>. Evidence points to clinicians' beliefs and practice behaviours related to LBP which are discordant with contemporary evidence<sup>2</sup>. While aligning beliefs and behaviours with evidence has demonstrated effectiveness among practicing clinicians<sup>3</sup>, a more sustainable and cost-effective approach to positively developing cross-discipline workforce capacity and initiating a culture shift in the management of LBP<sup>4</sup> may be to target upskilling towards the *emerging* health workforce. The aim of this study was to investigate the alignment with evidence of university allied health and medical students' beliefs and clinical recommendations for LBP. The study aligned with the recommendations in the WA Spinal Pain Model of Care<sup>5</sup>.

## Methods

- The WA Musculoskeletal Health Network led a survey of final year students in chiropractic, medicine, occupational therapy, pharmacy, and physiotherapy disciplines in four Western Australian universities.
- Disciplines were selected on the basis of their scope of practice related to LBP in primary care settings.
- Demographic data, LBP-related beliefs data (Health Care Providers Pain and Impairment Relationship Scale (HC-PAIRS) and the Back Beliefs Questionnaire (BBQ)) and activity, work and bed-rest clinical recommendations for an acute LBP clinical vignette, were collected.
- Data were collected between 0-3 months prior to completion of the students' full university training.

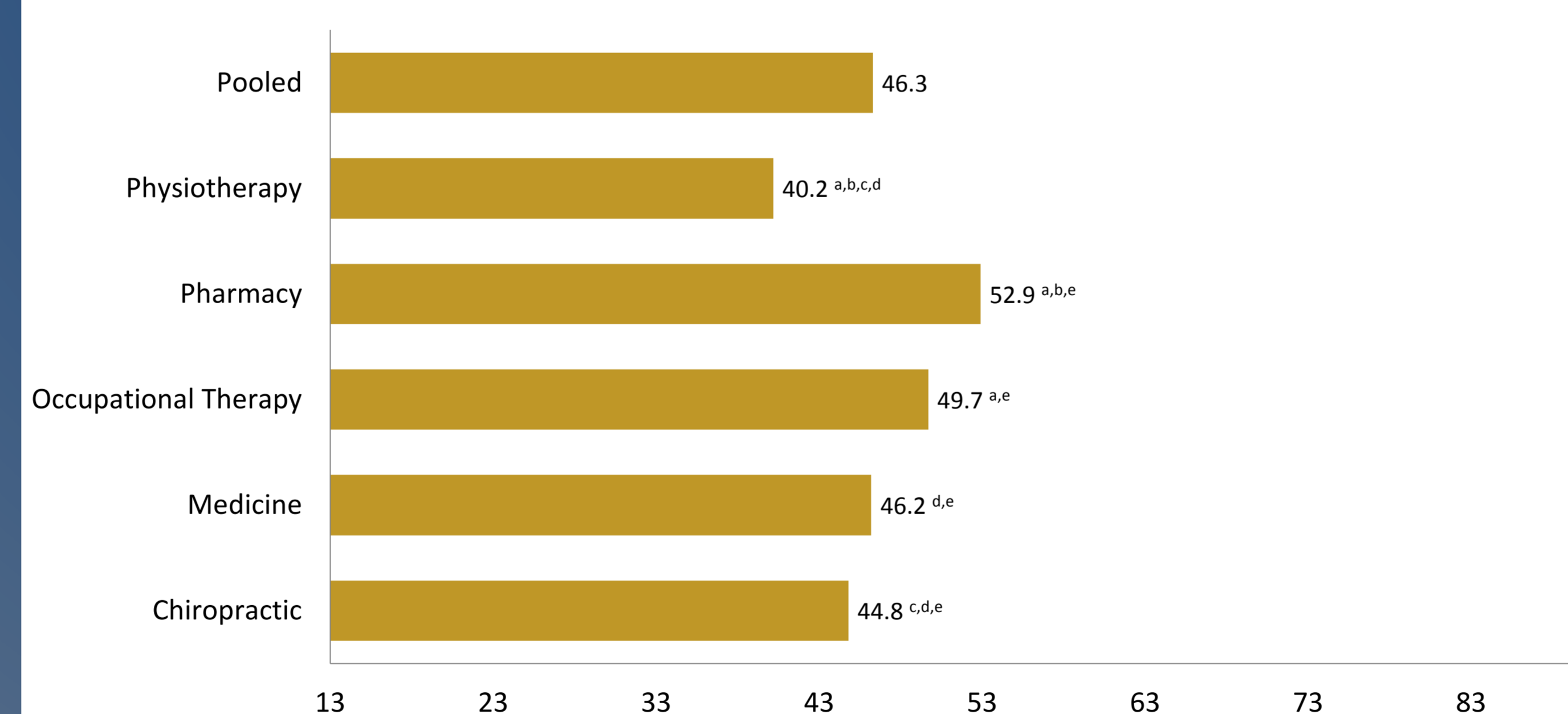
## Results

- 602 students completed the survey (response rate 74.6%).
- Cross-discipline differences in beliefs were observed ( $p > 0.001$ ) (Figures 1-2).
- Physiotherapy and chiropractic students reported significantly more positive beliefs related to LBP compared to the other disciplines, while pharmacy students reported the poorest beliefs.
- A significantly greater proportion of chiropractic and physiotherapy students reported guideline-consistent recommendations compared to other disciplines (Table 1).
- A one point increase in HC-PAIRs (i.e. more negative beliefs), was associated with a decrease in the odds of guideline-consistent responses (OR: 0.93-0.96).
- A one point increase in BBQ (i.e. more positive beliefs) was associated with an increase in the odds of guideline-consistent responses (OR: 1.05-1.12).



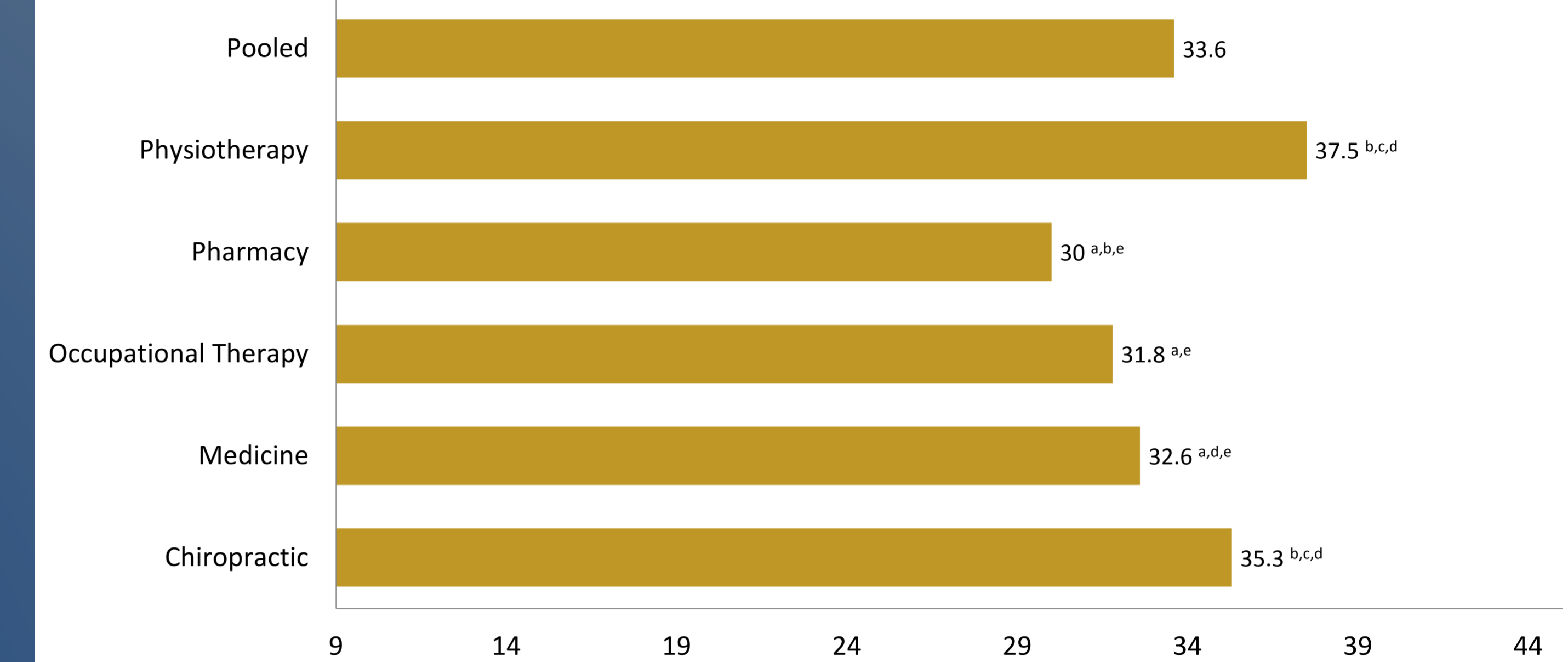
**Table 1. Percentage of respondents in each discipline who selected guideline-consistent recommendations for physical activity, work and bed-rest in response to a vignette**

Patient Vignette:	Discipline					
	Chiropractic	Medicine	Occupational Therapy	Pharmacy	Physiotherapy	Pooled
% guideline-consistent recommendation						
Physical Activity	76.1 <sup>b,c,d</sup>	37.9 <sup>a,d,e</sup>	25.4 <sup>a,e</sup>	17.2 <sup>a,b,e</sup>	62.0 <sup>b,c,d</sup>	41.5
Work	78.3 <sup>c,d</sup>	66.3 <sup>c,d</sup>	35.2 <sup>a,b,e</sup>	44.8 <sup>a,b,e</sup>	75.3 <sup>c,d</sup>	61.1
Bed-rest	84.8 <sup>b,c,d</sup>	65.1 <sup>a,c,d</sup>	41.4 <sup>a,b,d,e</sup>	23.9 <sup>a,b,c,e</sup>	74.5 <sup>c,d</sup>	57.0



<sup>a</sup> significantly different to chiropractic ( $p < 0.05$ ); <sup>b</sup> significantly different to medicine ( $p < 0.05$ ); <sup>c</sup> significantly different to occupational therapy ( $p < 0.05$ ); <sup>d</sup> significantly different to pharmacy ( $p < 0.05$ ); <sup>e</sup> significantly different to physiotherapy ( $p < 0.05$ )

**Figure 1. Modified HC-PAIRS scores for each discipline. Scores range from 13 to 91, with higher scores representing more negative beliefs about the relationship between LBP and impairment.**



<sup>a</sup> significantly different to chiropractic ( $p < 0.05$ ); <sup>b</sup> significantly different to medicine ( $p < 0.05$ ); <sup>c</sup> significantly different to occupational therapy ( $p < 0.05$ ); <sup>d</sup> significantly different to pharmacy ( $p < 0.05$ ); <sup>e</sup> significantly different to physiotherapy ( $p < 0.05$ )

**Figure 2. BBQ scores for each discipline. Scores range between 9 and 45 with higher scores representing more positive beliefs about LBP.**

## Discussion

- Physiotherapy and chiropractic students demonstrated more positive beliefs about LBP and a greater proportion of these students made guideline-consistent recommendations in response to a patient vignette regarding acute low back pain, compared to medicine, pharmacy or occupational therapy students.
- While domain-specific knowledge and skills necessarily vary between disciplines, more consistent alignment of LBP-related beliefs, attitudes and clinical behaviours across these disciplines may have bilateral benefits for the emerging health workforce and for people with LBP.

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