

# Letter to the editor on “education on pain disciplines in physical therapy in Chile: In need of change”

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To the editor,

We have taken an interest in the article by Órdenes-Mora et al., recently published in *Medwave* [1]. This brief communication qualitatively analyzed the curricula of accredited kinesiology undergraduate courses in Chile to determine whether they complied with the curricular recommendation of the International Association for the Study of Pain [2]. We appreciate the intention to raise awareness of opportunities for improvement in kinesiology undergraduate pain science education. However, we have detected some inconsistencies that we want to draw attention to.

To begin with, the analysis carried out by Órdenes-Mora and collaborators is not congruent with that proposed by the International Association for the Study of Pain. The authors state in their conclusion that “the totality of kinesiology curricula in Chile do not present a specific program for pain education, as recommended by said association” [1]. However, the International Association for the Study of Pain explicitly describes: “It is recommended that, where possible, the curriculum be taught as a discrete unit, with content and competencies aligned horizontally and vertically” [2]. In other words, a flexible integration of the domains and competencies of its curriculum is proposed rather at the micro-curricular level. The authors considered the presence or not of a “program” exclusively focused on pain for their analysis, which seems to be reductionist, considering that in the United States as of 2015, 94% of kinesiology careers integrate pain science at the micro-curricular level [3]. Consequently, the reductionist analysis deeply compromises the validity of the conclusions and recommendations.

Secondly, we appreciate the intention to provide recommendations for improving kinesiology education. However, we believe it is relevant to highlight that recommendations two and three are not supported by the results of Órdenes-Mora et al. [1]. Moreover, the recommendation to provide “continuing education” and “teacher training” courses is striking, especially because these aspects were not evaluated in this research.

Thirdly, to contrast the results of Órdenes-Mora et al. [1], we performed an analysis of the curricula, learning guides, and/or syllabi of the pain-related subjects of the three universities with which the authors of this letter are affiliated (Table 1). The micro-curricular analysis showed that the subjects incorporate the four domains recommended by the International Association for the Study of Pain, contrasting with that reported by Órdenes-Mora et al. [1]. Interestingly, the universities analyzed do not incorporate a specific subject on pain; however, they comply with the domains and competencies recommended by that association. These preliminary data allow us to speculate that a similar situation could occur in other kinesiology schools in Chile. However, further research is needed.

Finally, we believe a deeper analysis of how pain sciences are taught in kinesiology in Chile is necessary. Such an analysis could be contrasted not only with the curricular recommendations of the International Association for the Study of Pain but also with the professional training framework of World Physiotherapy [4].

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**Table 1.** Micro-curricular integration of kinesiology programs with the curriculum proposed by the International Association for the Study of Pain. [2].

Pain science-related subjects			Contents stated in the subject programs		Taxation to domains and competencies of the IASP				
Curricular placement	University	Nº							
First-year	1	1	International Classification of Functionality	Domain 2, Competency 2.1					
			Person-centered biopsychosocial reasoning	Domain 2, Competency 2.1					
	2	0	NA	NA					
	3	1	Pain perception	Domain 1, Competency 1.2					
Second-year	1	3	Types of nociceptors.	Domain 1, Competency 1.2					
			Nociceptive pathways	Domain 1, Competency 1.2					
			Painful perception	Domain 1, Competency 1.2					
			Neurosciences of human movement	Domain 1, Competency 1.2					
			Neurophysiology of sensorimotor learning.	Domain 1, Competency 1.2					
			Pathophysiology of nociception and pain.	Domain 1, Competency 1.2					
			Types of sensorimotor learning.	Domain 1, Competency 1.2					
			Acute and chronic pain.	Domain 2, Competency 2.2					
			Nociceptive, neuropathic, and neuroplastic pain.	Domain 1, Competency 1.2					
			Assessment of pain experience.	Domain 2, Competency 2.1					
			Pain and sensorimotor control.	Domain 1, Competency 1.2					
			2	0	NA	NA			
			3	3	Concepts in pain and nociceptive receptors	Domain 1, Competency 1.2			
	Cellular and molecular mechanisms of pain	Domain 1, Competency 1.2							
	Mechanisms of activation of nociceptive pathways	Domain 1, Competency 1.2							
	Clinical interviews of people with pain	Domain 2, Competency 2.1							
	Assessment of pain as a symptom	Domain 2, Competency 2.1							
	Pain assessment maneuvers and instruments	Domain 2, Competency 2.1							
	Type, origin, and character of pain	Domain 1, Competency 1.1							
	Third-year	1	1	Clinical rationale for therapeutic exercise.	Domain 3, Competency 3.4				
2		2	Neurophysiology of pain	Domain 1, Competency 1.2					
			Pain as a protective system	Domain 1, Competency 1.2					
			Classification of pain according to IASP and ICD-11	Domain 2, Competency 2.1					
			Contributing factors to chronic pain	Domain 2, Competency 2.2					
			Clinical rationale and musculoskeletal assessment	Domain 2, Competency 2.1					
			Central sensitization	Domain 1, Competency 1.2					
			Anamnesis in people with pain	Domain 2, Competency 2.1					
			Clinical and psychosocial assessment questionnaires	Domain 2, Competency 2.1					
			Physical examination in people with pain	Domain 2, Competency 2.1					
			Functional assessment with a biopsychosocial approach	Domain 2, Competency 2.1					
			Psychometry of pain assessment instruments	Domain 2, Competency 2.1					
			Prescription of physiotherapy with analgesic effect	Domain 3, Competency 3.4					
			Exercise programming with hypoalgesic effect	Domain 3, Competency 3.4					
			Fourth-year	1	2	Electrotherapy for musculoskeletal pain.	Domain 3, Competency 3.4		
						Neuroscience-based pain education.	Domain 3, Competency 3.1		
						Contextual factors modulating pain.	Domain 2, Competency 2.2		
2	3	Therapeutic alliance in people with pain		Domain 3, Competency 3.1					
		Musculoskeletal pain assessment clusters.		Domain 2, Competency 2.1					
		Flag system in kinesiological rehabilitation.		Domain 2, Competency 2.2					
		Intervention strategies in people with pain		Domain 3, Competency 3.2					
		Use of physical agents in people with pain		Domain 3, Competency 3.4					
		Education of people with pain		Domain 3, Competency 3.1					
		Exercise-induced hypoalgesia		Domain 3, Competency 3.2					
3	2	Pain and wound management	Domain 4, Competency 4.1						
		Kinesiologic approach to musculoskeletal pathology	Domain 4, Competency 4.4						
Total contents per university	University 1	7	Domain 1 = 9 (53%)	Domain 2 = 5 (29%)	Domain 3 = 3 (18%)	Domain 4 = 0 (0%)			
	University 2	5	Domain 1 = 3 (16%)	Domain 2 = 10 (56%)	Domain 3 = 5 (28%)	Domain 4 = 0 (0%)			

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Pain science-related subjects			Contents stated in the subject programs		Taxation to domains and competencies of the IASP
Curricular placement	University	Nº			
University 3	7	Domain 1 = 5 (42%)	Domain 2 = 3 (24%)	Domain 3 = 2 (17%)	Domain 4 = 2 (17%)

Domain 1,Basic concepts and mechanisms of pain..Domain 2: Pain assessment and measurement. Domain 3: Pain management. Domain 4: Clinical conditions. NA: Not applicable. IASP: International Association for the Study of Pain. ICD-11: International Classification of Diseases, 11th edition. Competency 1.1: Nature of pain. Competency 1.2: Theories and science for understanding pain. Competency 2.1: Tools and outcomes for measuring pain. Competency 2.2 : Patient, provider, and system factors. Competency 3.1: Patient inclusion in pain care. Competency 3.2: Comprehensive pain-management plan. Competency 3.4: Pain treatment plans based on the risk-benefit assessment of available treatments. Competency 4.1: Unique pain assessment and management of special population needs. Competency 4.4: Individualized pain management plan.  
Source: Prepared by the authors.

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## Carta a la editora sobre "educación sobre las disciplinas del dolor en las carreras de kinesiología en Chile: necesidad de un cambio".



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