

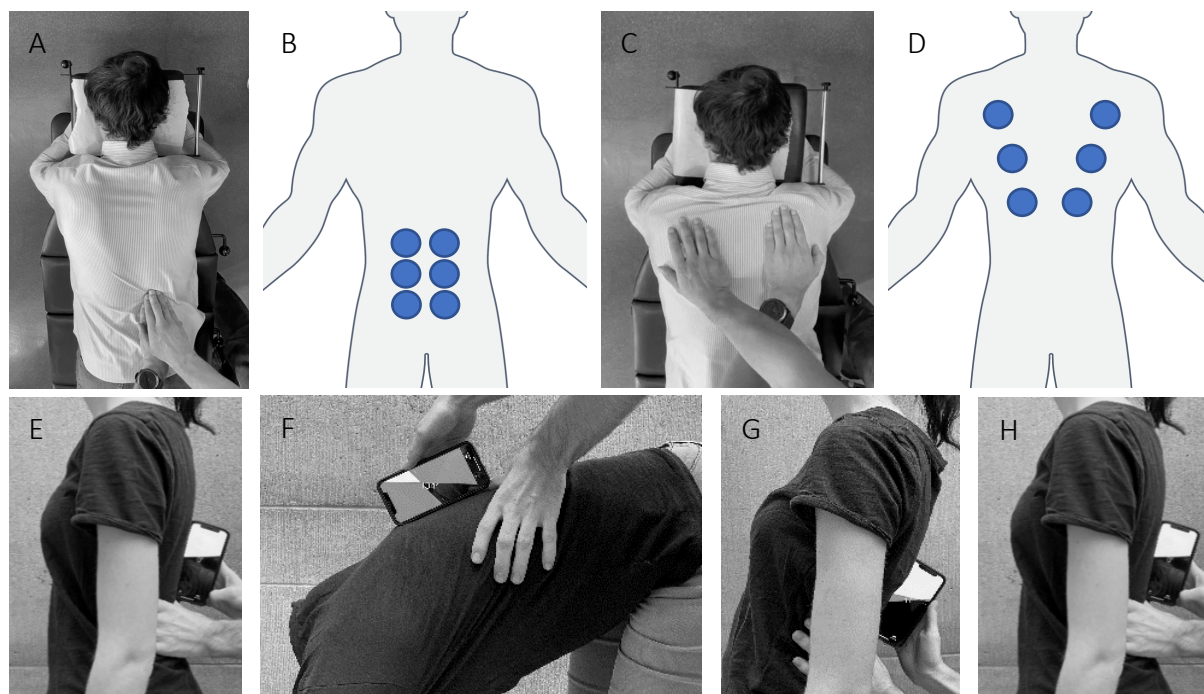
Supplemental File 5 – Supplementary Figure and Tables

Title: Blinding assessment of manual therapy interventions of the back in Swiss graduate students: a blinding feasibility randomized controlled trial

Authors: Javier Muñoz Laguna, Emanuela Nyantakyi, Urmila Bhattacharyya, Kathrin Blum, Matteo Delucchi, Felix Karl-Ludwig Klingebiel, Marco Labarile, Andrea Roggo, Manuel Weber, Thomas Radtke, Milo A Puhan, Cesar A Hincapié

Journal: *Chiropr Man Therap*

Figure S1. Study interventions and range of motion assessment. The active manual therapy intervention involved a standard soft tissue mobilization protocol (A) applied to six areas of the lumbar paravertebral region (B). The control manual therapy intervention (C) included light touch in six broad areas of the thoracic region and scapulae, distal to the spine (D). Measurement of the active sagittal range of motion started by asking participants to adopt a neutral standing position and placing the inferior limit of the mobile phone (measuring device) at T12, following palpation of the lowermost rib and the T12 spinous process (E). Participants were instructed to reach maximum active flexion and extension, using consistent verbal commands. The degrees of maximum active flexion (F) and extension (G) were then recorded. The measurement sequence ended with the participants adopting a neutral standing position (H).*



* Images for range of motion assessment and interventions depict investigators, whom provided informed consent for publication

Table S1. Blinding assessment full results in participants.

5-level response format:

Assignment	Perception					Total
	Strongly believe active	Somewhat believe active	Somewhat believe control	Strongly believe control	Don't know	
Active MT	2 (18.2%)	4 (36.4%)	0	0	5 (45.5%)	11
Control MT	1 (7.7%)	3 (23.1%)	3 (23.1%)	2 (15.4%)	4 (30.7%)	13
Total	3	7	3	2	9	24

Abbreviation: MT, manual therapy

3-level analysis format:

Assignment	Perception			Total
	Believe active	Believe control	Don't know	
Active MT	6 (54.5%)	0	5 (45.5%)	11
Control MT	4 (30.7%)	5 (38.5%)	4 (30.7%)	13
Total	10	5	9	24

Table S2. Blinding assessment full results in outcome assessors.

5-level response formats:

Perception outcome assessor 1 (masked to range of motion measurement)						
Assignment	Strongly believe active	Somewhat believe active	Somewhat believe control	Strongly believe control	Don't know	Total
Active MT	0	0	0	0	11 (100%)	11
Control MT	0	0	0	0	13 (100%)	13
Total	0	0	0	0	24	24

Perception outcome assessor 2 (masked to range of motion measurement)						
Assignment	Strongly believe active	Somewhat believe active	Somewhat believe control	Strongly believe control	Don't know	Total
Active MT	0	4 (36.4%)	0	1 (9.1 %)	6 (54.5%)	11
Control MT	2 (15.4%)	2 (15.4%)	1 (7.7 %)	0	8 (61.5%)	13
Total	2	6	1	1	14	24

Perception outcome assessor 3 (not masked to range of motion measurement)						
Assignment	Strongly believe active	Somewhat believe active	Somewhat believe control	Strongly believe control	Don't know	Total
Active MT	2 (18.2%)	2 (18.2%)	2 (18.2 %)	2 (18.2%)	3 (27.3%)	11
Control MT	3 (23.1%)	2 (15.4%)	2 (15.4%)	2 (15.4%)	4 (30.8%)	13
Total	5	4	4	4	7	24

Perception all outcome assessors						
Assignment	Strongly believe active	Somewhat believe active	Somewhat believe control	Strongly believe control	Don't know	Total
Active MT	2 (6.1%)	6 (18.2%)	2 (6.1%)	3 (9.1%)	20 (60.6%)	33
Control MT	5 (12.8%)	4 (10.3%)	3 (7.7%)	2 (5.1%)	25 (64.1%)	39
Total	7	10	5	5	45	72

Table S3. Key subgroup characteristics and outcomes of participants stratified by treatment arm and perceptions about assigned intervention.

Characteristics and outcomes — immediately post-intervention	Active manual therapy		Control manual therapy	
	Correct perception (N = 6)	Incorrect perception (N = 5)	Correct perception (N = 5)	Incorrect perception (N = 8)
Age — median (IQR)	28 (27 to 29)	29 (27 to 32)	28 (28 to 28)	32 (28 to 33)
Gender — N (%)				
Female	3 (50 %)	4 (80 %)	4 (80 %)	6 (75 %)
Male	3 (50 %)	1 (20 %)	1 (20 %)	2 (25 %)
Other or prefer not to say	0	0	0	0
Manual therapy experience — N (%)				
Providing only	0	0	0	0
Receiving only	0	2 (40 %)	0	2 (25 %)
Providing and receiving	1 (17 %)	0	0	2 (25 %)
No experience	5 (83 %)	3 (60 %)	5 (100 %)	4 (50 %)
Upper back ache, pain or discomfort ^a — N (%) [*]				
None	5 (100%)	4 (80%)	4 (80%)	6 (75%)
Yes – slightly uncomfortable	0	1 (20 %)	1 (20 %)	2 (25 %)
Yes – moderately or very uncomfortable	0	0	0	0
Lower back ache, pain or discomfort ^a — N (%) [*]				
None	5 (83%)	5 (100%)	4 (80 %)	8 (100%)
Yes – slightly uncomfortable	1 (17 %)	0	1 (20 %)	0
Yes – moderately or very uncomfortable	0	0	0	0
Self-reported back flexibility ^b — N (%) [*]				
Good or very good	3 (50 %)	2 (40 %)	2 (40 %)	3 (38 %)
Average	3 (50 %)	2 (40 %)	3 (60 %)	5 (62 %)
Poor or very poor	0	1 (20 %)	0	0
ROM measurements (deg) — median (IQR) [*]				
ROM, flexion	125.0 (118.5 to 135.3)	139.0 (110.0 to 143.0)	147.0 (144.0 to 148.0)	136.0 (129.8 to 143.0)
ROM, extension	34.0 (29.8 to 44.3)	54.0 (46.0 to 56.0)	40.0 (30.0 to 52.0)	45.0 (29.0 to 58.3)
ROM, total flex-ext	159.5 (151.0 to 170.3)	195.0 (153.0 to 197.0)	178.0 (175.0 to 202.0)	180.0 (164.8 to 195.0)
Change in ROM, flexion	2.5 (1.3 to 6.8)	2.0 (-1.0 to 8.0)	5.0 (3.0 to 9.0)	2.0 (0 to 4.3)
Change in ROM, extension	0.5 (-1.0 to 4.3)	1.0 (-2.0 to 6.0)	0 (0 to 5.0)	3.0 (-0.3 to 6.3)
Change in ROM, total flex-ext	4.0 (1.5 to 6.5)	4.0 (-3.0 to 13.0)	8.0 (5.0 to 9.0)	7.5 (-0.5 to 9.3)

Abbreviations: *deg*, degrees; *ext*, extension; *flex*, flexion; *IQR*, interquartile range; *med*, median; *NA*, not applicable; *ROM*, range of motion; *SD*, standard deviation

^a Adapted from the Cornell Musculoskeletal Discomfort Questionnaire [13]

^b Adapted from the International Fitness Scale [12]