

Abstract submission for 2nd BPS Young Researchers Day 2023

To submit your abstract, please return the completed form by email to info.bpsyrd@gmail.com (mention "BPS-YRD 2023 surname first name" in the subject of your message)

Title

Maximum 25 words.

Are pain-related psychological variables associated with postural control in individuals with low back pain? A systematic review and meta-analysis

Authors

Full list of authors and their main affiliations (Last name, First name, Institution, Department). Please only mention the department and institution, no research unit or address of the affiliations.

Van Wesemael Sofie¹ (*), Bogaerts Katleen^{1,2} (*), De Baets Liesbet³, Goossens Nina¹, Vlemincx Elke⁴, Amerijckx Charlotte¹, Sohail Suniya^{1,5}, Matheve Thomas^{1,6} (**), Janssens Lotte¹ (**) (*= shared first author, **= shared last author)

¹Hasselt University, Faculty of Rehabilitation Sciences; ²University of Leuven, Faculty of Psychology and Educational Sciences; ³Vrije Universiteit Brussel, Department of Physiotherapy; ⁴Vrije Universiteit Amsterdam, Department of Health Sciences; ⁵Foundation University Islamabad, Department of Rehabilitation Sciences; ⁶Ghent University, Department of Rehabilitation Sciences

Presenting author

Last and first name. The presenting author is expected to attend the BPS Young Researchers Day.

Van Wesemael Sofie

PhD student Postdoc Junior clinician and other healthcare professionals

Abstract

Maximum 250 words. The abstract should be understandable for a multidisciplinary audience. Choose a structured abstract with sections Background and Aims, Methods, Results (if available) and Conclusions (or hypotheses and possible implications). Protocols of ongoing or future studies are welcome. Acronyms should be defined. Generic names of drugs should be used. Please do not add references, tables, figures or graphs.

Background and Aims: Altered postural control can contribute to low back pain (LBP), particularly during challenging postural tasks. Moreover, higher levels of pain-related fear and pain catastrophizing are (weakly) associated with protective spinal movement behaviour in individuals with LBP. However, it remains unknown whether pain-related psychological variables are associated with postural control, measured by center of pressure (CoP) variables, in individuals with LBP.

Methods: A systematic review and meta-analysis was conducted (PROSPERO CRD42021241739). Pubmed, Web of Science and PsycInfo were searched until November 2022. Studies were eligible for inclusion if they measured CoP variables during static bipedal standing and if they reported at least one pain-related psychological variable. Random-effect models were used to calculate pooled correlation coefficients between pain-related psychological variables and CoP variables during different postural tasks with increasing difficulty. An adapted version of the GRADE was used to determine the certainty of evidence.

Results: Sixteen studies (n= 723 participants) were included. Pain-related fear and pain catastrophizing were the only reported pain-related psychological variables. Results indicated that

both pain-related fear ($-0.04 < \text{pooled } r < 0.15$) and pain catastrophizing ($0.28 < \text{pooled } r < 0.29$) were weakly associated with CoP variables. For all associations, the certainty of evidence was rated as very low.

Conclusion: In the majority of the findings, higher levels of pain-related psychological variables are weakly associated with an increase in CoP motion and velocity in individuals with LBP, regardless of the postural task difficulty. The certainty of evidence is very low.

Word count

Count and report here the number of words for abstract title and body.

Title: 19 words Abstract body: 245 words

Acknowledgements

Acknowledgments for funding bodies which supported the submitted research.

NA

Preferred format

Poster presentation Oral presentation No preference

I agree to my data being stored and used:

- for publication in the conference booklet.
- to receive further information regarding the BPS Young Researchers Day
- to receive further information from the Belgian Pain Society