



PEARL

IMPLICIT BODY PERCEPTION AT THE PELVIC GIRDLE WITH THE TWO-POINT ESTIMATION TASK: A RELIABILITY STUDY

Halliday, B; Freeman, J; Chatfield, S; Marsden, J

Publication date:

2023

Link:

[Link to publication in PEARL](#)

Citation for published version (APA):

Halliday, B., Freeman, J., Chatfield, S., & Marsden, J. (2023). *IMPLICIT BODY PERCEPTION AT THE PELVIC GIRDLE WITH THE TWO-POINT ESTIMATION TASK: A RELIABILITY STUDY*. Paper presented at Advanced Pain Discovery Platform (APDP) Nottingham 2023.

All content in PEARL is protected by copyright law. Author manuscripts are made available in accordance with publisher policies. Wherever possible please cite the published version using the details provided on the item record or document. In the absence of an open licence (e.g. Creative Commons), permissions for further reuse of content should be sought from the publisher or author.

Conclusions

A single SNP in each of the genes ANO10, P2RX7, PRKAG1 and SLC12A9 was associated with developing CRPS-1. Our genetic results suggest CRPS-1 pathogenesis may be different between the sexes. As all four genes are expressed in macrophages, and the P2RX7 SNP rare allele affects the function of NLRP3, we hypothesise that a person's risk of developing CRPS-1 can be caused by altered macrophage activity.

Implicit body perception at the pelvic girdle with the two-point estimation task: a reliability study

B Halliday, J Freeman, S Chatfield, J Marsden

University of Plymouth

Background & aims

Implicit body perception disturbance has been evidenced in low back pain (LBP) using the two-point estimation (2PE) measure. Previous research has only investigated unilateral LBP, not included a pain-free control group, or examined the measure at the pelvic girdle. Aims: 1) design a testing protocol suitable for assessing pain crossing the midline (central) 2) investigate regional 2PE reliability 3) compare left and right sides and lumbar and pelvic regions.

Methods

A central 2PE measure was designed and protocolised. Non-pregnant, pain-free adult women > 18 years old were recruited from a university setting. Participants were assessed with repeated 2PE measures (estimating distance between two points (120mm apart) on a digital calliper). 2PE data was collected via two online and two in-person sessions. In-person intra and inter-rater reliability of the 2PE was assessed using intra-class correlation coefficients (ICC). Differences between lateral (Left versus right) and central (pelvic girdle versus lumbar spine) were assessed using paired t-tests.

Results

22 women (mean age 40.5 +/-13.3) participated. 2PE demonstrated good intra-rater reliability with two repeated measures (lateral ICC=0.71 95%CI [0.49-0.87] / central ICC=0.80 95%CI [0.59-0.91]. Inter-rater reliability ranged from poor to good (lateral ICC=0.48 95%CI 0.58-0.75 / central ICC=0.65 95%CI [0.33-0.84]. There were no differences between the left and right lateral measures (p=.198) but the 2PE was greater for the lumbar compared to the pelvic region (p<0.005).

Conclusion

The 2PE task demonstrates good intra-rater reliability of a central and lateral measure. Differences in 2PE between regions may reflect somatosensory representation differences and may have implications for pain perception.