

Intra and inter rater reliability of temporal summation, thermal and pressure pain thresholds in the asymptomatic population

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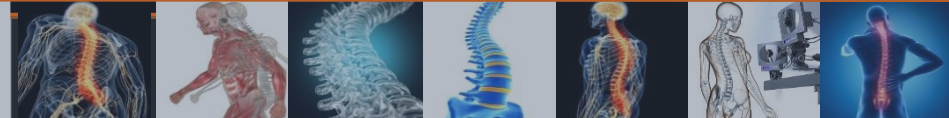
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Introduction

- ~28 million experience long term pain the UK (Fayaz *et al.* 2016)
- Quantitative Sensory Testing (QST) is used to quantify pain, and predict outcomes in OA and WAD (Goldsmith *et al.* 2012, Fingleton *et al.* 2015)
- **Aim:** Establish intra and inter-rater reliability of temporal summation (TS), pressure pain thresholds (PPT) and thermal pain thresholds (CPT, HPT)



Methods

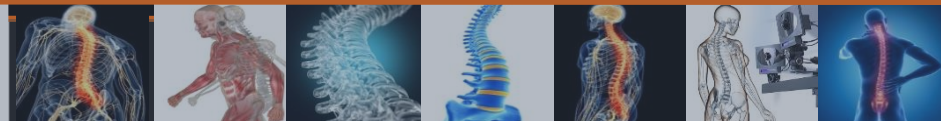
- Convenience sample - 20 healthy participants
- 2 QST trained therapists as raters
- 3 sites tested (UL, LL, Spine)
- ICC 3,2, standard error of measurement (SEM) and Bland Altman plots



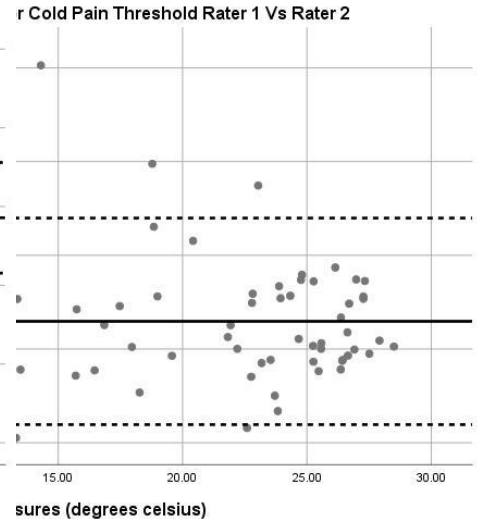
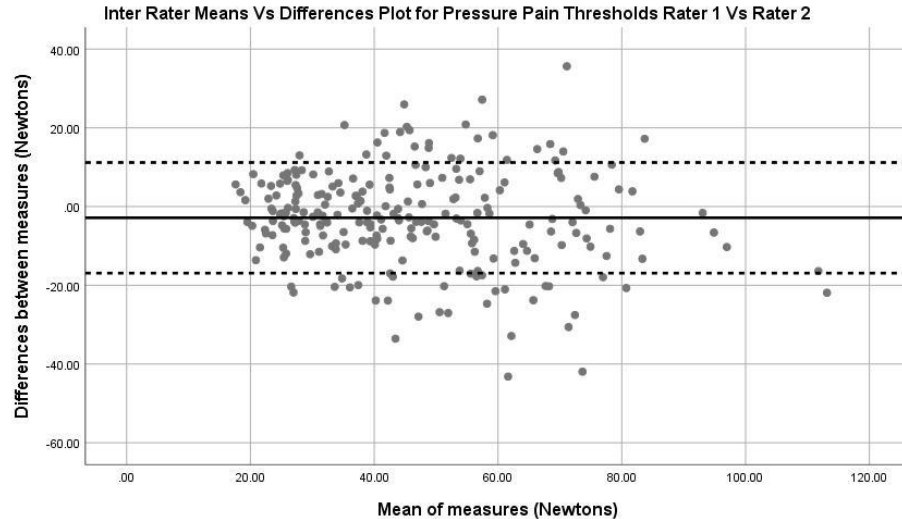
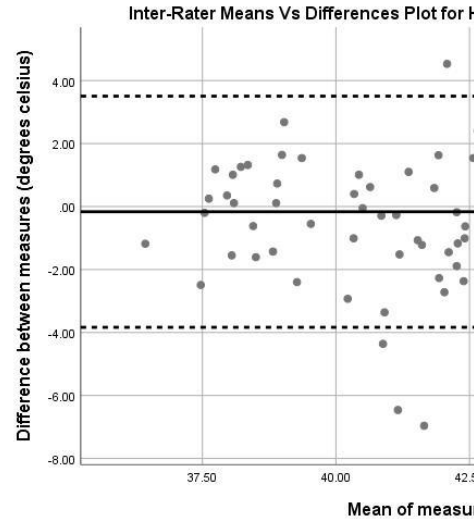
Results

- Average age - 27.55 (SD-8.06); 50% male

	Rater	HPT	PPT	TS
Intra-Rater ICC Range	Rater 1	0.76,0.83 (0.41,0.93)	0.41,0.83 (-0.11,0.93)	0.20,0.90 (-1.18,0.96)
	Rater 2	0.85,0.94 (0.42,0.98)	0.70,0.87 (0.27,0.96)	0.58,0.91 (-0.16,0.97)
Inter-Rater ICC Range	Day 1	0.83,0.95 (0.57,0.98)	0.66,0.92 (0.14,0.97)	0.49,0.84 (-0.34,0.94)
	Day 2	0.88,0.94 (0.61,0.98)	0.80,0.93 (0.49,0.98)	0.30,0.92 (-0.87,0.97)
SEM	Rater 1	0.90°C	6.54N	N/A
	Rater 2	0.85°C	6.45N	N/A



Results

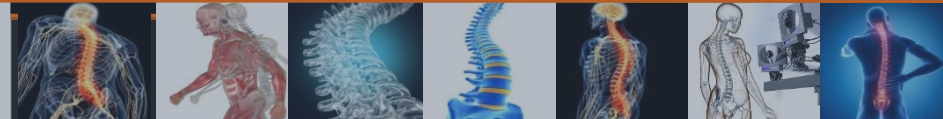


Within Day (Inter-Rater) Agreement for Heat Pain Thresholds | Within Day (Inter-Rater) Agreement for Pressure Pain Thresholds | Within Day (Inter-Rater) Agreement for Cold Pain Thresholds



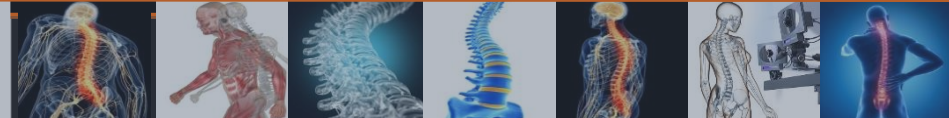
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Conclusions

- First study to evaluate intra and inter-rater reliability of HPT, CPT, PPT and TS combined
 - HPT and PPT - moderate/good reliability
 - TS - variable reliability
 - CPT - limited conclusions
- PPT technique could explain variability in rater agreement
- Findings informed further research in MSK patients



Research Updates



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