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INTRODUCTION

What is a paradoxical heat sensation (PHS)?

- A feeling of warmth when the skin is cooled.
- PHS is a pathological sign associated with neuropathy e.g. diabetic polyneuropathy (DPN)

RESEARCH QUESTIONS

- Does the **presence of PHS** differ between diabetic patients **with and without polyneuropathy** and **with and without painful polyneuropathy**?
- Do the **sensory profiles** differ between patients **with and without PHS**?

WHY?

Characterizing patients with PHS compared to patients without PHS may improve our understanding of what leads to PHS.

POPULATION

261 DPN patients (93 with neuropathic pain), **63 patients** with diabetes mellitus (DM) **without polyneuropathy** and 97 matched controls

From a study[^] on prevalence of neuropathy in type 2 diabetes

DPN defined using the Toronto criteria

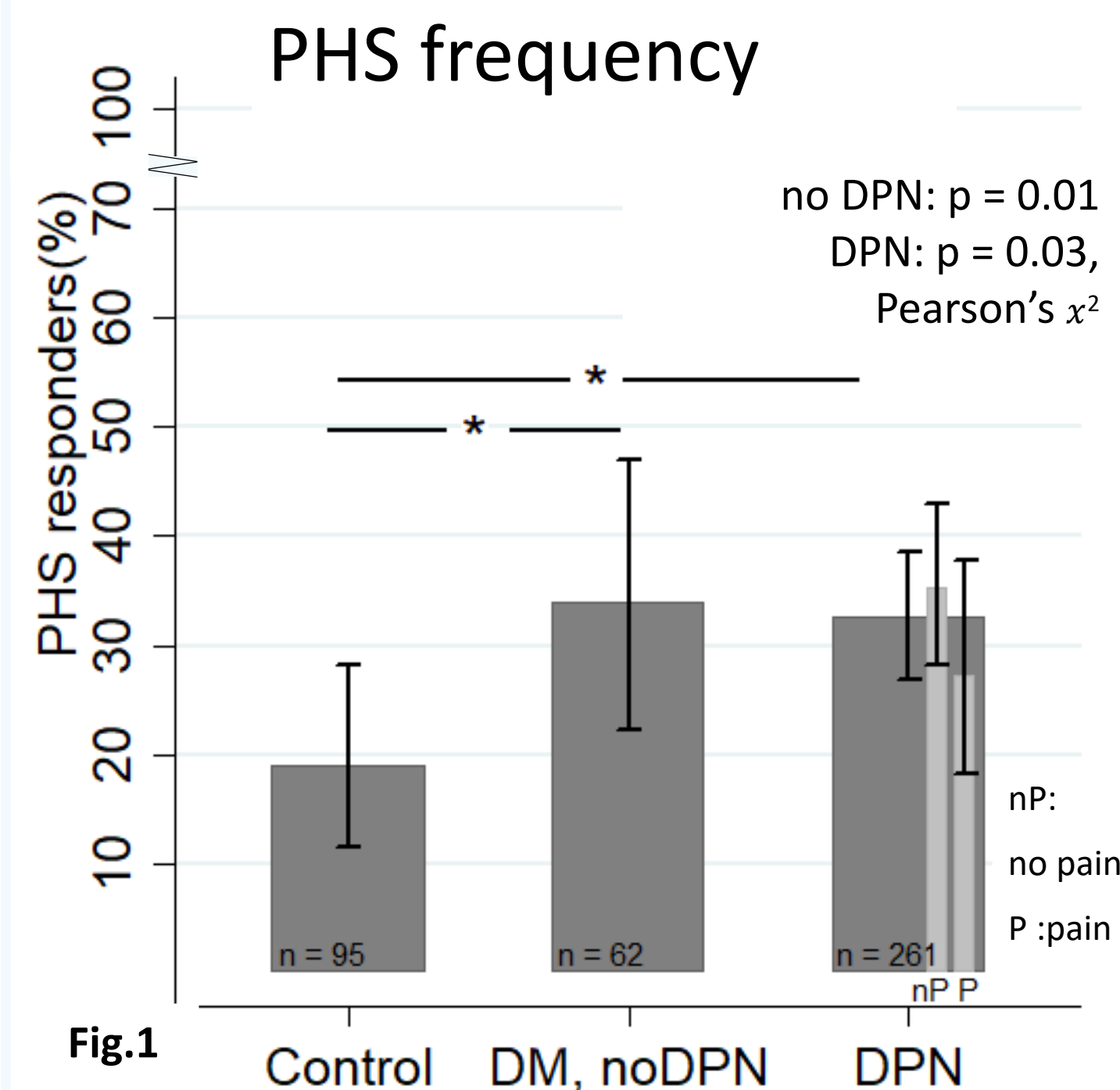
METHODS

Relationship between **PHS** and

- **Neuropathy** and **neuropathic pain**
- **Sensory parameters**: quantitative sensory testing (QST), nerve conduction and skin biopsy

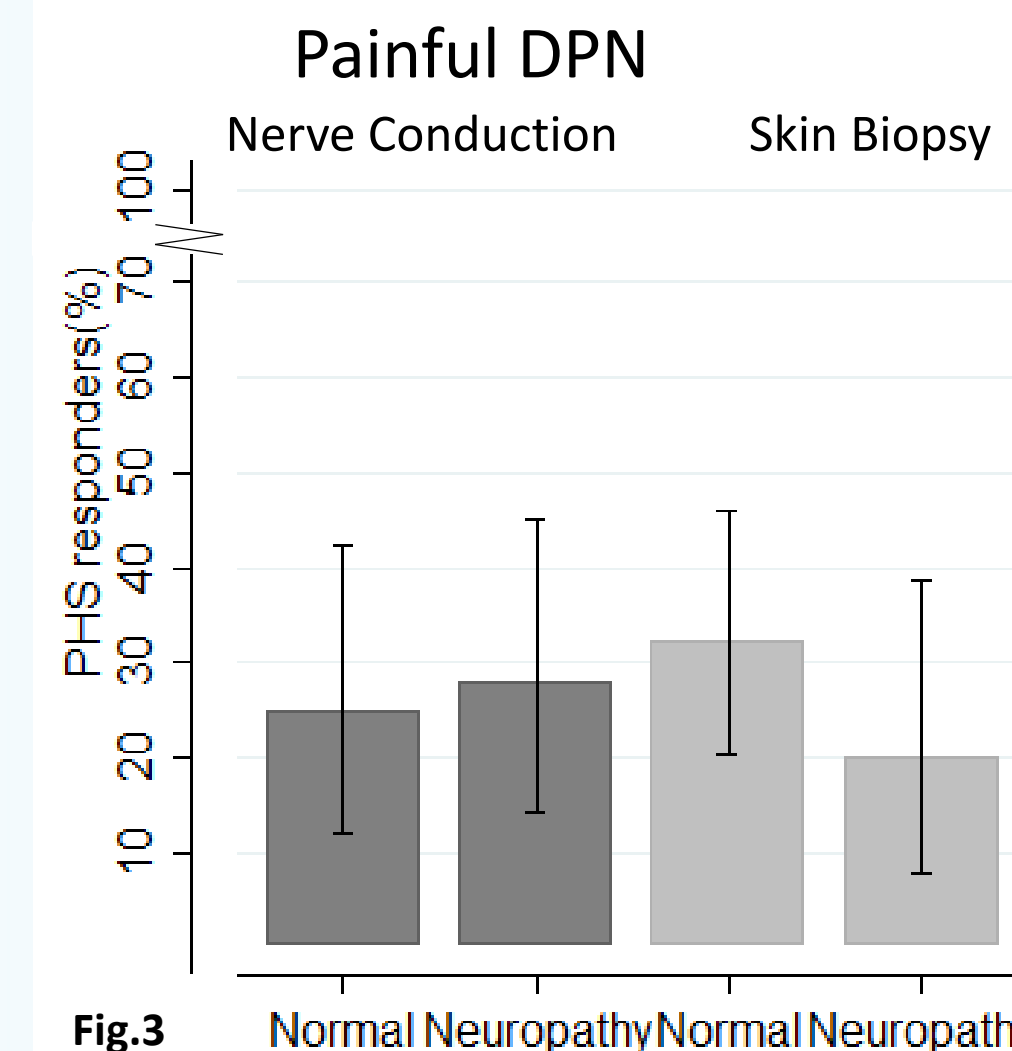
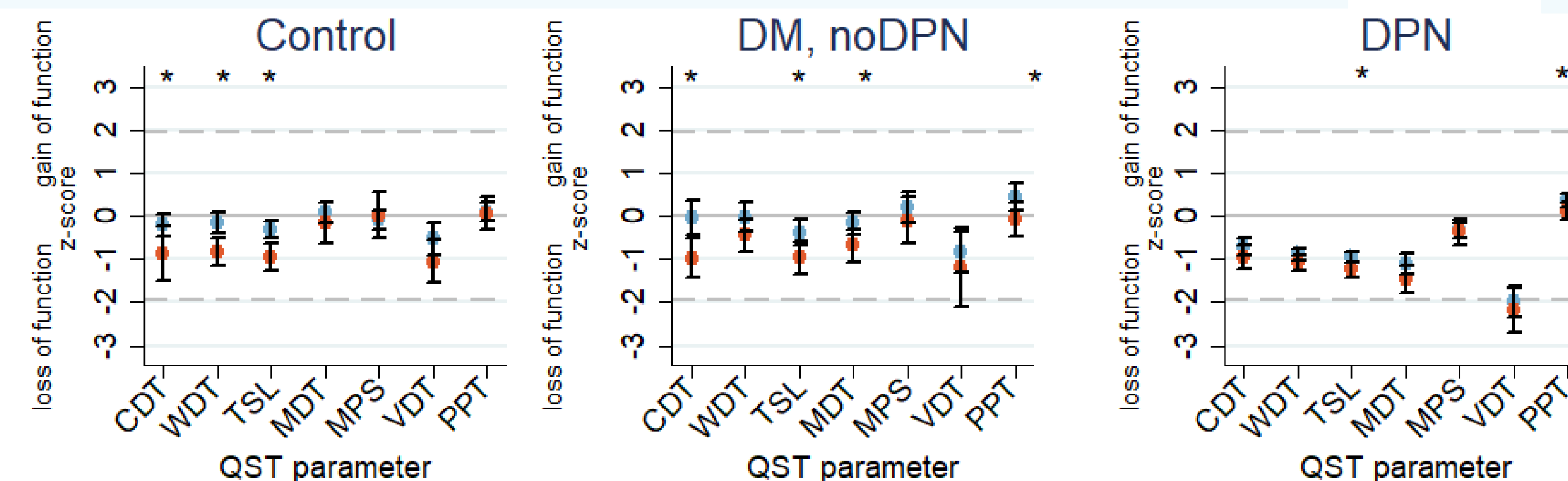
RESULTS

- **More PHS** in diabetic patients than controls
- **No difference** in those **with and without neuropathy** and **painful polyneuropathy**



RESULTS

PHS was related to sensory loss in controls and patients without DPN.
DPN: sensory loss regardless of PHS status



No difference in presence of **PHS** when having a **normal or abnormal nerve conduction** or **skin biopsy** measurement (demonstrated here in the painful DPN group)

CONCLUSION

- **Higher occurrence** of **PHS** in diabetic patients
- PHS was related to **thermal sensory loss**
- Future studies may be directed at investigating **why some patients experience PHS** and others do not

[^] (Gylfadottir and Itani et al. 2020)
Funding: The study was supported by a grant from the Novo Nordisk Foundation:
Grant number NNF14OC0011633