



Spinal Cord Stimulation Access in Rural and Remote Populations: A Canadian Retrospective Cohort Study



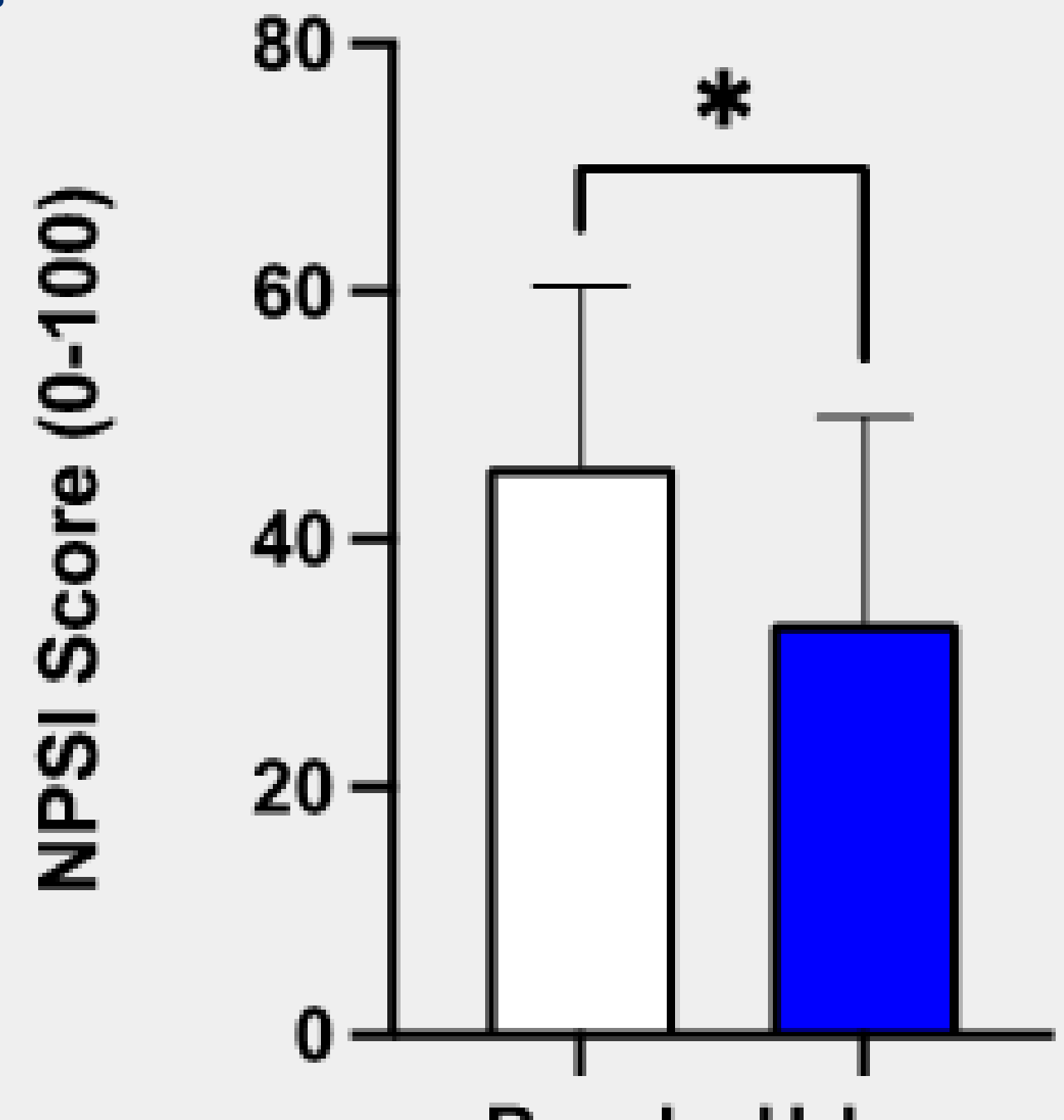
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Introduction

- Individuals living in rural and remote regions have limited access to specialized chronic pain care.
- Barriers include long wait times and lack of access to specialists.
- Little is know about spinal cord stimulation (SCS) access and outcomes in underserved populations.

Methods

- Retrospective cohort study analyzed data from the Neuromodulation Pain Program at TWH from July 2022 to June 2024.
- Patients categorized using postal codes (rural, remote, urban).
- Demographics, pain profiles, referral data, trial eligibility and outcomes, and one-year post-implant data were compared.



DEMOGRAPHIC AND BASELINE DATA	REMOTE (N=80) MEAN±SD, N (%)	URBAN (N=240) MEAN±SD, N (%)	P-VALUE
AGE (YEARS)	57.7±14.2	60.2±14.9	0.18
GENDER (F:M)	50 (63%) : 30 (38%)	120 (50%) : 120 (50%)	0.052
DURATION OF PAIN (YEARS)	10.5±10.7	9.4±23.5	<u>0.01</u>
TRIAL ELIGIBILITY • ELIGIBLE • NOT ELIGIBLE	61 (76%) 19 (24%)	146 (61%) 94 (39%)	<u>0.01</u>
TRIAL STATUS • TRIAL SUCCESS • TRIAL FAILURE	31 (84%) 6 (16%)	45 (66%) 23 (34%)	<u>0.045</u>
REFERRING PHYSICIAN • FAMILY DOCTOR • SPECIALIST	30 (38%) 50 (62.5%)	90 (38%) 150 (62.5%)	0.99
DIAGNOSIS • PSPS • OTHER	34 (42.5%) 46 (57.5%)	114 (47.5%) 126 (52.2%)	0.43
NRS (0-10)	6.8±1.6	6.7±1.7	0.7
OMEQ	36.4±82.7	20.3±52.1	0.09
GAD 7	9.4±5.7	10.4±6.2	0.19
PHQ-9	12.1±6.3	12.6±7.0	0.53
DN4 • (<4) • (>4)	24 (30%) 54 (67.5%)	91 (38%) 143 (59.5%)	0.19
PCS	24.1±12.7	28.0±14.0	<u>0.04</u>
PSQI	11.0±4.7	10.6 ±4.6	0.45
BPI	47.8±12.6	46.1±13.2	0.32
NPSI	48.5±20.8	46.8±22.3	0.56
EQ-5D VAS	42.7±23.1	46.0±22.7	0.28

Results

- 370 patients: 240 urban, 80 remote, 50 rural.
- Remote patients: longer pain duration.
- Remote patients: higher trial eligibility & success.
- Urban patients: higher pre-trial pain. catastrophizing.
- Rural patients: higher neuropathic pain symptom inventory scores at 1-year follow-up.

Conclusion

- This study underscores the promise of SCS for rural and remote patients.
- Rural and remote patients who access SCS have comparable outcomes to urban counterparts.
- We continue to see critical disparities in chronic pain for these groups.
- Addressing barriers through streamlined pathways is essential to ensure equitable, effective pain management across all geographic regions.

References

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