



The Impact of Urban Greenery Level on Indigenous Mental Health.

Introduction



Correlate Greenery, Indigenous identity and Mental health



Nature is central to **Indigenous culture** [1]



Unequal greenery distribution [2]



Aid **urban development**



Strengthen Indigenous research

Methods



Cross sectional study of **2018**



Greenery levels (NDVI)



Self-perceived **mental health**



Chi-square test

- Demography → Mental health (n=134)
- Greenery → Mental health (n=195)
- Interaction Greenery ↔ Demography (n=282)

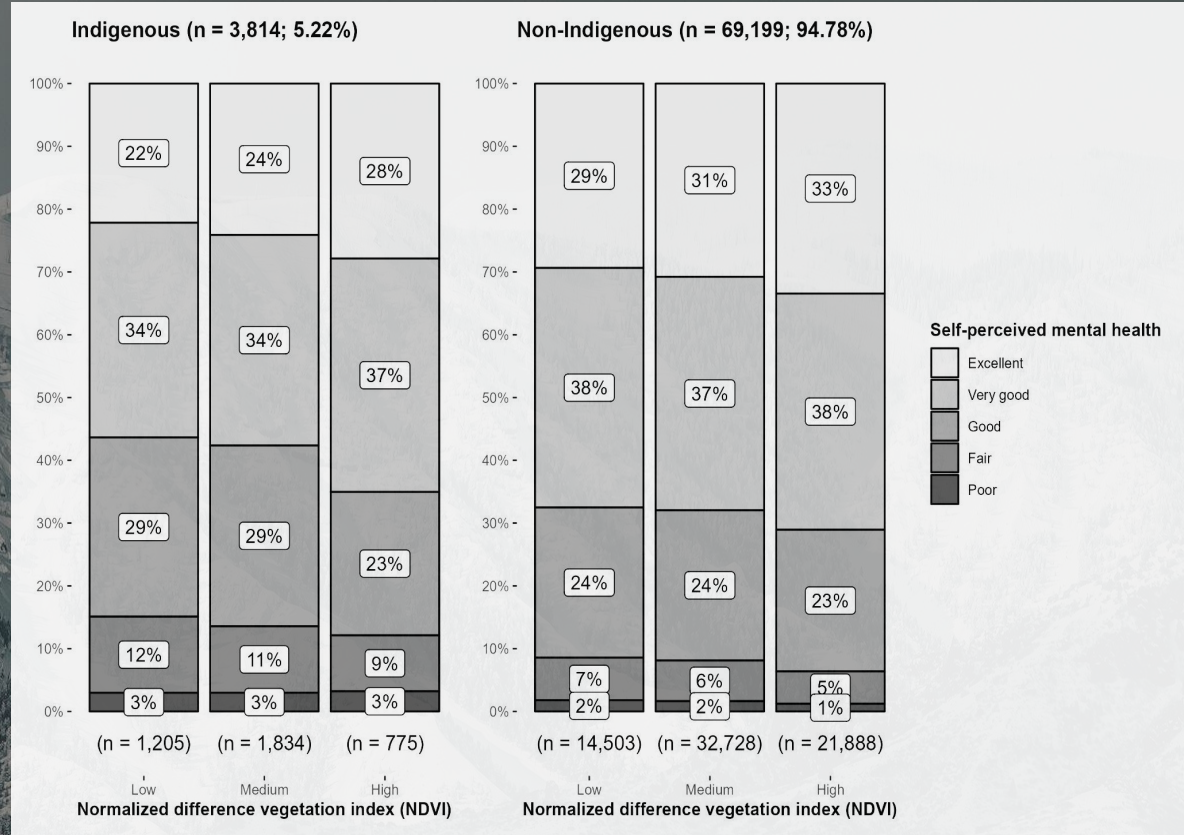


250 random samples for
countrywide coverage

Results

 *Figure 1:*

Dataset overview of **n = 72,933** effective participants categorized by Indigenous identity, greenery levels and self-perceived mental health



Results

 *Figure 2:*

Insignificant **Chi-Square** test p-values collected for demography, greenery and their interactions on mental health over **250 random** samples

Demography → Mental health

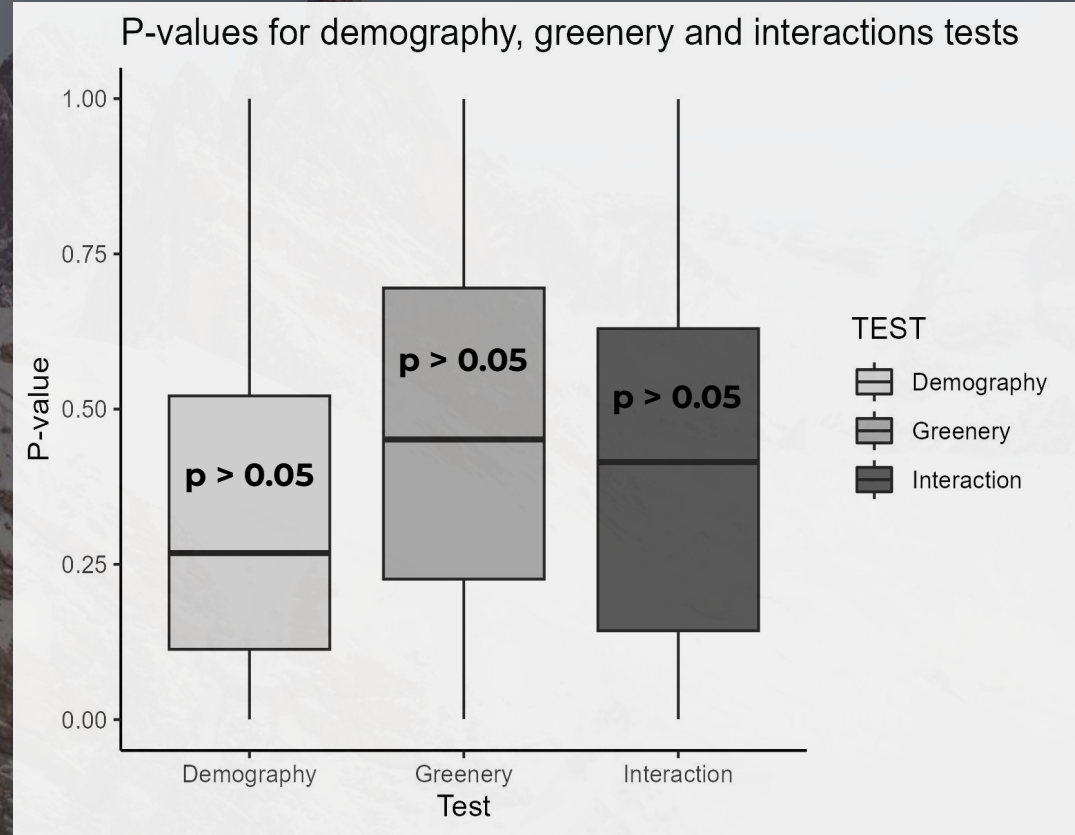
27 of 250 tests with a p-value < 0.05

Greenery → Mental health

9 of 250 tests with a p-value < 0.05

Interaction Greenery ↔ Demography

17 of 250 tests with a p-value < 0.05



Discussion



Few tests were significant
→ **Inconclusive**



Imprecision of greenness



Unbalanced data (5.22% Indigenous)



Self-report **biases**



Alternatives to improve well-being



More Indigenous **research needed**

References



Additional
visualizations



McGill
UNIVERSITY

[1] Government of Canada, S. C. (2021, May 19). Ethnocultural and socioeconomic disparities in exposure to residential greenness within urban Canada.

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[2] Hatala, A. R., Njeze, C., Morton, D., Pearl, T., & Bird-Naytowhow, K. (2020). Land and nature as sources of health and resilience among Indigenous youth in an urban Canadian context: A photovoice exploration. BMC Public Health, 20(1), 538. <https://doi.org/10.1186/s12889-020-08647-z>

[3] Barton, J., & Rogerson, M. (2017). The importance of greenspace for mental health. BJPsych International, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5663018/?report=classic>

[4] Logie, C. H., Lys, C. L., Sokolovic, N., Mackay, K. I., Donkers, H., Kanbari, A., Pooyak, S., & Loppie, C. (2021). Contextual factors associated with depression among Northern and Indigenous adolescents in the Northwest Territories, Canada. Global Mental Health (Cambridge, England), 8, e22. <https://doi.org/10.1017/gmh.2021.21>