CHRD 2022: Abstract & Poster Submission Form

Submitter Name

Harman Kaur Vats

Submitter Email

vatsh@myumanitoba.ca

Presenter Status

- ◉ Undergraduate Students
- ○ Masters Student
- ○ PhD Student
- ○ Post-Doctoral Fellows
- ○ Residents
- ○ Non-Trainee

Research Category

- ○ Basic Science
- ◉ Clinical
- ○ Community Health / Policy

Role in the project

- ☑ Design
- ☐ Perform Experiments
- ☑ Analyze Data
- ☑ Write Abstract
- ☑ Statistical Analyses

Title

Evaluating the relationship between protective psychosocial factors and hypertension in an overweight cohort of Indigenous youth; a cross sectional study

Background

Indigenous communities are disproportionally affected by chronic diseases due to the impacts of colonization. Despite adversity, many youth continue to thrive.

Objective

We hypothesize that supportive behavioral and psycho-social factors are associated with lower rates of hypertension in an at-risk overweight cohort of First Nations youth.

Methods

The study includes controls from the iCARE study. Inclusion criteria: age 10 – 25 years, Indigenous ethnicity, and BMI >85th%ile. Primary outcome: hypertension; by 24-hour Ambulatory Blood Pressure Monitor (ABPM) or BpTRU device (average of 5 readings). Metabolic, behavioral (physical activity) and psychosocial factors (physical activity, food security, social support, perceived stress and resilience) were compared between youth with and without hypertension. A univariate linear regression analysis evaluated associations between covariates and mean daytime systolic and diastolic BP as a continuous outcome.

Results

A total of 129 youth with a mean age of 14.4 years and 54.3% female were included (54 with ABPM and 75 with BpTRU data). Mean BMI z-score was 3.28 +/- 0.28. Overall, 26.4% had HTN (38.9% by ABPM; 22.0% by BpTRU). Youth with hypertension had higher markers of metabolic syndrome: HbA1c (5.66 + 0.274% vs. 5.49 + 0.27%; p = 0.005), ALT (26.0 [9.00, 162] vs 19.0 [10.0, 74.0], p = 0.03), and glomerular hyperfiltration: eGFR (131 [94.3, 222] ml/min/1.73m2 vs 121 [89.2, 179]ml/min/1.73m2, p = 0.02). Lower systolic blood pressure was associated with lower stress levels (β= 5.19; p=0.27) and higher food security (β = -9.49; p=0.001), and participation in more vigorous-physical activity (β= -0.048; p=0.047) was associated with lower diastolic blood pressure.

Conclusion

The high rates of hypertension in overweight First Nations youth support screening with gold standard ABPM. The protective psychosocial and behavioral factors identified support the need for systemic changes, and community lead prevention efforts to strengthen protective factors that exist within Indigenous communities.

Do you have a table/figure to upload?
○ Yes ⊙ No

Authors

- For each author, please click "**[+] Add Item**" and provide the author's information

Name	Email	Role	Profession
Harman Vats	vatsh@myumanitoba.ca	Presenting Author	Other

Brandy Wicklow	bwicklow@hsc.mb.ca	Co Author	Associate Professor
Jon McGavock	jmcgavock@chrim.ca	Co Author	Associate Professor
Elizabeth Sellers	elizabeth.sellers@umanitoba.ca	Co Author	Full Professor
Melissa Del Vischio	mdelvecchio@chrim.ca	Co Author	Other
Brenden Dufault	brenden.dufault@umanitoba.ca	Co Author	Other
Allison Dart	adart@hsc.mb.ca	Co Author	Assistant Professor