ABSTRACT SUBMISSION FORM

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SEX + GENDER

Exploring the role of sex and gender on health research

CHRD
CHILD HEALTH RESEARCH DAYS

CHRD 2020: Abstract Submission Form

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Title
An evaluation of sex differences and socioeconomic deprivation amongst Canadian children with high blood pressure

Background
The increasing prevalence of high blood pressure (HBP) in the pediatric population requires an analysis of risk factors. Previous studies demonstrated socioeconomic deprivation may affect the health of male and female adults differently. The impact of low SES status on pediatric hypertension is unknown.

Objective
This study sought to evaluate sex differences and associations with SES status in children with HBP.

Methods
We performed a cross-sectional analysis of 85887 children aged <18years from the Canadian Primary Care Sentinel Surveillance Network from primary care EMR data in eight provinces. HBP was defined as >90th percentile or >120/80 on 2 separate occasions between 2010-17. Differences in sex, social, material, and combined social/material deprivation scores were examined between children with and without HBP. Additional covariates included age, BMI z-score, diabetes, hyperlipidemia, and depression.

Results
The prevalence of HBP was 8.6% in males and 6.7% in females (p<0.0001). Children with HBP tended to be younger at their first BP measurement (age 10.56 vs. 10.80 years, P<0.0001), have increased BMI Z-score (0.66 vs. 0.24, P<0.0001), live in the most deprived quintile (17.9 vs. 15.9, P=0.0013) and have diabetes (1.44 vs. 0.54%, P<0.0001), depression (7.46 vs. 5.06 %, P<0.0001) and hyperlipidemia (3.01 vs. 1.00 %, P<0.0001). In univariate regression analyses stratified by sex, boys in the most deprived quintile had increased odds of HBP (OR 1.16(1.04-1.31), whereas females did not (OR 1.04 (0.91-1.19)). In combined multivariate regression, male sex predicted HBP with an aOR of 1.27 (1.19-1.36) after correcting for age, BMI z-score, and deprivation, whereas deprivation was no longer significant.

Conclusion
Male sex is a significant risk factor for HBP in Canadian children in the primary care setting. This study suggests an association between deprivation and HBP, particularly in boys. Further study is required to understand this relationship.

Theme:
Clinical

Do you have a table/figure to upload?
No

Are you willing to participate in Goodbear's Den?
Yes

Presenter Status:
Residents

What was your role in the project?
Involved at all levels of project development as stated above

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