



October 6th + 7th, 2021 | Virtual Conference

17TH ANNUAL CHILD HEALTH RESEARCH DAYS

# Nutrition for a Changing World

The Science of Nourishing the Next Generation

## CHRD 2021: Abstract & Poster Submission Form

### Submitter Name

Hannah

First

Steiman De Visser

Last

### Email

hsteimandevisser@gmail.com

### Research Category:

- Basic Science
- Clinical
- Community Health / Policy

### What was your role in the project?

- Design
- Perform Experiments
- Analyze Data
- Write Abstract

### Presenter Status:

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

**Title**

Early Life Adversity and Obesity at 18: A Prospective Cohort Study

**Background**

Nearly 1 in every 3 adolescents in Canada lives with overweight or obesity. Exposure to adverse childhood experiences (ACEs) increases an adolescent's risk of obesity, however the factors that mediate this association are unclear.

**Objective**

We hypothesized that exposure to ACEs before 9 yrs old would be associated with higher BMI at 18 yrs and that this association would be partially mediated by psychological-emotional factors.

**Methods**

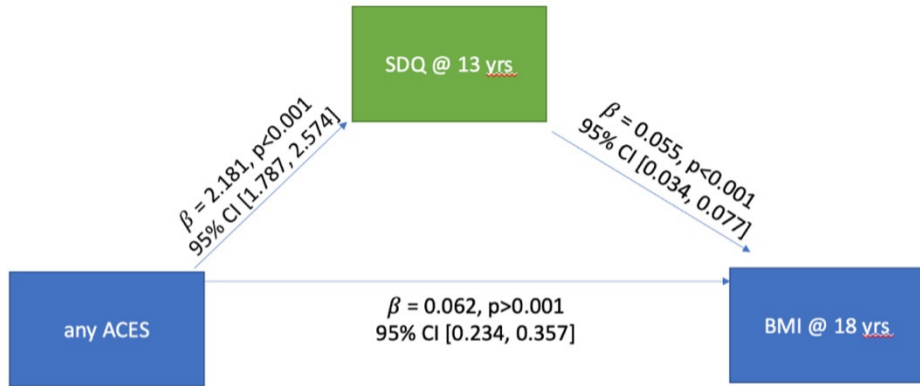
We studied 6942 adolescents that provided data at 9, 13 and 18 yrs of age in the Growing up in Ireland cohort study. The main exposures were 14 ACEs, 4 of which were included in the original ACEs study. The primary outcome was Body Mass Index measured objectively at 18 yrs. The mediators were behavioural difficulties (strengths and difficulties questionnaire (SDQ)) and self-concept (Piers Harris self-concept scale (PH)).

**Results**

Among the 6942 adolescents with data from all 3 visits, 49% were female and 26.5% were overweight/obese at 18 years. At all three ages BMI was significantly higher in those exposed to an ACE, compared to those were not. In the fully adjusted regression models at 13 yrs of age, ACEs were associated with a 2-point increase (95% CI: 1.8 to 2.6) to the total SDQ score and a 1-point decrease (95% CI: -1.6 to -0.5) in the PH score, but not associated with diet or exercise. Higher behavioural difficulties (Fig. 1) and lower self-concept at 13 yrs were both associated with a higher BMI at 18 years. After adjusting for mediators, no statistically significant association was observed between ACEs and BMI (Fig 1). These results were similar for boys and girls.

**Conclusion**

The association between ACEs and BMI in adolescence that is mediated by behavioural difficulties and self-concept. A more complex model, such as a structural equation model, will need to confirm these findings.



**Figure 1.** Model when adjusting for household income, household social class, primary caregiver BMI, diet, and exercise at 18 years.

## Authors

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

Name	Email	Role	Profession
Steiman De Visser H	hsteimandevisser@gmail.com	Presenting Author	
Brunton N	nbrunton@chrim.ca	Co Author	Graduate
McGavock J	jmcgavock@chrim.ca	Co Author	Associate Professor