

mental health are identified and evaluated for group membership. To confirm that distinct trajectory groups are linked to different health consequences, Rao-Scott chi-square test and analysis of variance will be applied to handle categorical and continuous health outcome variables. The health outcomes include hypertension, diabetes, heart disease, stroke, asthma, arthritis, and back problems. Lastly, this study will compare group-based trajectory modeling to a standard statistical methodology (multilevel modeling) when modeling longitudinal data, and discuss possible benefits.

PP-003 **DEVELOPMENTAL TRAJECTORIES OF BODY MASS INDEX THROUGHOUT ADULTHOOD: EVIDENCE FROM THE NATIONAL POPULATION HEALTH SURVEY**

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Background There is little research that uses group-based trajectory modeling to capture adult body mass index (BMI) trajectories for the Canadian population.

Objectives The aims of this study are 1) to identify and determine the number and features of mutually exclusive body mass trajectory groups throughout adulthood; 2) to examine the association between covariates and each BMI trajectory group; 3) to assess whether health consequences vary within different trajectory groups.

Methods This study will apply group-based trajectory modeling to map adult body mass trajectories with an age axis spanning 18 to 64 years, based on the longitudinal data from Statistics Canada's National Population Health Survey 1994 (n=17276). Group-based trajectory modeling is a powerful semi-parametric statistical approach that captures information about inter-individual differences within a large population. Risk factors (time-instable covariates) including gender and age cohort, and time-varying covariates such as diet, daily activities, education level, income, lifestyle (sleep, smoking, and alcohol), stress, and