Characterising risk clusters in the context of curbing obesity

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Conflictos de interés: Los autores declaran no tener conflictos de interés alguno.

Abstract

Background: In the last few years, Canada has been ac vely working on the implementa on of popula on health programs aimed to improving healthy lifestyle behaviors that have poten al to reduce the obesity epidemic. Obesity increases the risk of a number of main chronic diseases and is also associated with an increased risk of premature mortality. Our understanding of the underlying risk factors that contribute to obesity is increasing but there is s ll much more to be done. Increasingly research is showing that the prevalence of risk behaviors is not independent; most individuals have more than one risk behavior. A be er understanding of risk "clusters" or the co-occurrence of unhealthy behaviors will contribute greatly to targeted preven on, health promo on, and policy ac vi es. Purpose: The objec ve of this work is to understand and characterize the clustering of XX risk behaviors contribu ng to the obesity epidemic in Canada. Our hypothesis is that mul ple risk behavior s may occur in single individuals rather with randomly in di erent individuals and that the groups of people with di erent combina ons of risk can be di eren ated using cluster analysis.

Study/Interven on Design: Latent class analysis of cross-sec onal survey data

Methods: We will use na onal survey data collected from the Canadian Community Health Survey (CCHS) and poten ally the Canadian Health Measurement Survey (CHMS) to es mate the distribu on of XX risk factors known to be associated with the risen rates of obesity among Canadian adults. The risk behaviors include smoking, physical inac vity, sedentary lifestyle, low fruit and vegetable intake, consump on of sugar-sweetened drinks, inadequate sleep, illicit drugs and high alcohol consump on. Prevalence rates of individual risk factors and up to five or more risk factors will be es mated for all adults as well as by sex and age subgroups. All risk factors of interest are set up as categorical variables. Latent class analysis will be used to characterize "clusters" of risk behaviors

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associated with obesity. Mixture models (latent class analysis) gender-specific and for the total popula on are fit to iden fy relevant risk behavior clusters associated with obesity. Results: This study presents an overview of chronic disease risk and looks at the na onal data available to explore the feasibility of deriving meaningful combina ons of behavioral risk factors that can inform mul focal mul level interven ons to prevent and/or control obesity in the Canadian popula on.

Conclusion: Updated prevalence rates of mul ple key obesity risk factors in the popula on and characterizing the clustering of mul ple risk factors and their interrela on with each other and with obesity can greatly contribute to informing the curbing childhood obesity. Similar methodology can be applied to other types of risk clusters for the preven on of chronic and other diseases.