

Does Stress-Related Poor Diet Quality Explain Socioeconomic Inequities in Health? A Structural Equation Mediation Analysis in Women and Men

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Objectives: Individuals with a lower socioeconomic position (SEP) have poorer health than their more advantaged counterparts. Psychosocial stress and diet quality have been shown to *individually* mediate associations between SEP and health, however studies have not yet investigated whether psychosocial stress and diet quality *jointly* mediate these associations. This is an important research question as stress-related unhealthy eating is often invoked as an explanation for diet-related health inequities, particularly among women, seemingly with no empirical justification. This study examined whether psychosocial stress and diet quality jointly mediate associations between SEP and self-rated health (SRH) in women and men.

Methods: Adults living in Canada who participated in the 2018 or 2019 International Food Policy Study were included ($n = 5645$). Participants reported SEP using indicators that reflect materialist (educational

attainment, perceived income adequacy) and psychosocial pathways (subjective social status) underlying health inequities. Participants also reported psychosocial stress, dietary intake (to estimate diet quality via the Healthy Eating Index-2015) and SRH. Structural equation modelling simultaneously modelled multiple pathways linking the three indicators of SEP (educational attainment, perceived income adequacy, subjective social status) with SRH mediated by psychosocial stress and diet quality, stratified by gender.

Results: There was no evidence that psychosocial stress and diet quality jointly mediated associations between SEP and SRH in women or men. Diet quality mediated associations between educational attainment and SRH in women and men, and between subjective social status and SRH in men. Psychosocial stress mediated associations between perceived income adequacy and SRH in women and men, and between subjective social status and SRH in women.

Conclusions: Although often invoked as an explanation for diet-related health inequities, stress-related poor diet quality did not mediate associations between SEP and SRH in women or men. However, psychosocial stress and diet quality individually mediated some of these associations, indicating that SEP was partially embodied via these pathways, with some differences by gender.

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