



**Early Life Adversity and Frailty: A cross-sectional analysis of retrospective data from the Canadian Longitudinal Study on Aging**

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**ABSTRACT:**

Early life adversity (ELA) is known to have a lasting impact on the health of individuals. In this study, we assessed whether exposure to ELA is associated with frailty later in life. Data on 27,748 participants (45-86 years old) of the Canadian Longitudinal Study on Aging (CLSA) included physical, emotional, and sexual abuse, exposure to household violence, and neglect prior to age 16 and parental death, divorce, or mental illness prior to age 18. The outcome variable was the frailty index (FI), which represents a cumulative score of 76 health deficits. ELA was prevalent in more than 60% of participants and the FI (mean=0.13, SD=0.07) increased between 7 and 30% ( $p < 0.001$ ) for any single ELA exposure. The overall number of ELAs was also associated with the FI, with the strongest effect observed in those exposed to three or more ELA types (B [95% CI] =0.04[0.035-0.040]). The association of ELA and frailty was generally stronger in females than males and, among males only, in younger (45-64) than older (65+) participants. Income, education, obesity, alcohol consumption, social activity and satisfaction with life also significantly modified the association of ELA and frailty. Our results suggest that ELA increases the risk of frailty, with the impact varying across different ELA types, sex and age groups. Hence, preventative measures targeted at those who have experienced ELA, even younger adults, may contribute to the improvement of the overall trajectory of aging.