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| **Understanding the contribution of physical and social environments to healthy aging: an evidence from Chinese aged populations** |
| **Background:** To meet the challenges of aging population, world health organization (WHO) proposed the goal of healthy aging. It emphasized the role of individual’s intrinsic capacity and related environments, which both affected functional ability. Frailty was occurred by the decline of physiological reserve and is seen as reflecting an interaction among individual factors and a range of environment elements. Moreover, frailty represents a public health priority for its highly and increasingly prevalent condition in the aging populations. Given the current few evidences, this study aims to examine the association between both physical and social environments with frailty among Chinese older people.**Methods:** Data were from the Shanghai Healthy City Survey in 2017, a subsample of 2,154 respondents aged ≥60 years from 42 neighbourhoods were conducted in current study. The FRAIL scale was used to assess frailty; and physical and social environments of neighbourhood were assessed using validated and psychometrically tested instruments. Sociodemographic characteristics included age, gender, education, marital status, employment, smoking, drinking and physical exercise. Multilevel analysis was conducted to examine whether physical and social environments were associated with frailty.**Results:** The prevalence of pre-frail status and frail status were 40.1% (95%CI: 38.0%~42.2%) and 16.2% (95%CI: 14.7%~17.7%), respectively. Those who were aged, unmarried, alcohol dependence and without physical exercise had a higher risk of frailty. Multilevel analysis indicated that after controlling for all covariates, individual-level aesthetic quality, social cohesion and social participation, and neighbourhood-level walkability were significant negatively correlated to frailty, with the ORs (95%CI) of quartiles were 0.89 (0.80-0.99), 0.90 (0.82-0.99), 0.86 (0.78-0.94) and 0.74 (0.57-0.97), respectively.**Discussion:** Frailty is probably a highly prevalent health condition among the aged population in China, both individual factors and neighbourhood environments are associated with frailty. Health promotion on aged populations should be more targeted, and it may decrease frailty among Chinese older people to encourage social participation, health behaviours, and build aesthetic, walkable and cohesive neighbourhoods.**Keywords:** healthy aging, frailty, physical environment, social environment, multilevel modelling. |