
POSTER ABSTRACT

Physical, psychological and social frailty among community-dwelling older adults in five European countries: a longitudinal study to support the development of personalized care.

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Background: Frailty is defined as a state with increased vulnerability in functioning across multiple physiological systems when facing stressors. Often three domains of frailty are considered: physical, psychological, and social. These three domains of frailty may relate to each other and develop over time. This study aimed to gain insight into the associations between physical, psychological and social frailty in order to support personalized prevention and care for older adults.

Methods: Participants were 1781 older adults in the population-based Urban Health Centres Europe (UHCE) project. Repeated assessments of physical, psychological, and social frailty and covariates were collected at baseline and one-year follow-up. Linear regression analyses were conducted to examine the unidirectional associations. Cross-lagged panel modelling was used to assess bi-directional associations.

Results: The mean age of participants in this study was 79.57 years (SD=5.54). More than half were female (61.0%) and completed secondary education (64.0%). A bi-directional association existed between physical and psychological frailty (effect of physical frailty at baseline on psychological frailty at follow-up: $\beta = 0.14$, 95%CI:0.09, 0.19; reversed path: $\beta = 0.05$, 95%CI:0.01, 0.09). A stronger effect from physical to psychological frailty was observed (Wald test for comparing lagged effects: $P < 0.05$). A unidirectional association indicated that a higher level of physical frailty was associated with a higher level of social frailty over one-year ($\beta = 0.05$, 95%CI:0.01, 0.68). No associations were found between social and psychological frailty.

Conclusion: This longitudinal study suggests that among community-dwelling older adults, a reciprocal relationship may exist between physical and psychological frailty, with a stronger effect from physical to psychological frailty. Also, a higher level of physical frailty was associated with a higher level of social frailty. Further research is needed to validate our findings and explore the

Ye L: Physical, psychological and social frailty among community-dwelling older adults in five European countries: a longitudinal study to support the development of personalized care

underlying pathways. Meanwhile, public health professionals should be aware of the associations between physical, psychological and social frailty in order to provide personalized prevention and care.