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# Editorial: Psychological frailty in aging: Lifespan trajectories and emerging risks

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## Editorial on the Research Topic

### Psychological frailty in aging: Lifespan trajectories and emerging risks

In the study of aging, “frailty” is the state that increases the individual’s vulnerability to stress factors. In the context of biomedical sciences, the concept of frailty has been operationalized differently, and the most used is the frailty phenotype. However, different constructs have emerged in recent decades complementing the traditional one of physical frailty. From a biopsychosocial, gerontological outlook, multidimensional and dynamic perspectives that include physical, functional, cognitive, and psychosocial domains (e.g., cumulative deficit model), are currently more relevant (Rockwood and Mitnitski, 2007; Gobbens et al., 2010).

As people age and become frailer, their psychosocial circumstances seem to have a more direct impact on their health. For example, the concept of “cognitive frailty” includes the presence of physical frailty and mild cognitive impairment in the absence of dementia and/or disability (Facal et al.). “Social frailty” would be the risk of losing resources (e.g., social support, cohesive activities, and social participation) in the aging process to meet key social needs for human development. This lack of cognitive and social resources in old age can be accompanied by a withdrawal of vitality, as well as a loss in meaning of life and will-to-live (Bunt et al., 2017; Lozupone et al., 2020). Thus, “psychological frailty” (understood as a decrease in cognitive, social, and *transcendental* resources) would increase a person’s vulnerability when exposed to stressful circumstances. In this way, there is no subordination between physical, psychological, and social areas, but rather these depend on different, interrelated developmental trajectories throughout the lifespan (Facal et al., 2019). Instead, what takes place is an interaction between socio-economic, familial, cognitive, and physiological factors present in aging (Navarro-Pardo et al., 2020). Similarly, the health crisis of COVID-19, as well as the psychosocial risks associated with the measures that

governments around the world have adopted to stop the spread of the virus, could have a significant impact directly on physical health, mental health and frailty, as well as indirectly, as a consequence of restrictions in mobility, activity, and social and family relationships, isolation, increased difficulties in performing physical exercise, delay in access to services health and loss of autonomy, to benefit from other services that have moved to the online space (Lozupone et al., 2020; Maltese et al., 2020; Pelicioni et al., 2020; Holland et al., 2021; Garner et al., 2022).

Regarding the role of affective factors across lifespan, depression and frailty present positive bidirectional associations in old adults, share common risk factors and may share pathophysiologic pathways. In the longitudinal study by Cao et al., prefrail or frail participants showed higher risks of depressive symptoms before and after adjusting for sociodemographic and health confounders, compared with the robust participants. In the cross-sectional study by Yuan et al., depression was a significant mediator of the relationship between frailty and the self-perception of the aging process, and so a significant psychological predictor of frailty of old adults. In the study by Yao, poor childhood experiences (poor self-reported health in childhood, poor mothers' and/or fathers' mental health) were associated with higher odds of depression in later adulthood, stressing the role of lifespan development in old adults' mental health.

Another topic of relevance is the relationship between frailty and motor signs of aging. In this Research Topic, Lin et al. have examined the longitudinal transitions in the phenotypes of old adults with impairments in mobility, cognitive functioning and both, showing the potential for reversibility of these impairments and identifying the predictors of convertibility of transitions between phenotypes in question.

In terms of biological aspects, aging is often accompanied by an increase in inflammation. Pothier et al. confirm significant links between inflammation (especially higher levels of C-reactive protein and interleukin-6) and frailty status. In our Research Topic three reviews directly point out to biomarkers able to predict or operationalize the relation between biological and psychological processes in frailty (Carini et al.; Moyses et al.; Pothier et al.). In this respect, although the research about this topic has increased considerably in recent years, no clear common pathways have been demonstrated for both frailty and cognitive impairment. Changes in microbiota, plasma biomarkers such as IGF-1 and IGFBP2, metabolic factors including low levels of vitamin E alpha tocopherol, omega-6 and 3 and albumin (Facal et al.) and neuroinflammation (Moyse et al.), may be all involved in cognitive frailty. Carini et al. also propose the potential role of microRNAs such as iR-92a-3p and miR-532-5p as biomarkers of cognitive frailty.

Finally, and regarding intervention studies, two papers show the effectiveness of interventions based on physical activity

and multicomponent in long-term care centers (Facal et al.) and home-based individual cognitive stimulation programs (Silva et al.). The home-based individual cognitive stimulation program proved to be a promising non-pharmacological alternative to address age-related cognitive changes, also having a positive effect on strengthening the relationship between the caregiver and the cared person. However, as this approach requires continuous involvement of caregivers, its success may depend on adequately mobilizing community responses. It is expected that these types of interventions addressing psychological frailty will increase progressively and intervention programs will obtain evidence of their effectiveness and efficiency in parallel with the aging of the population.

The comprehensive analysis of quantitative and qualitative evidence from different scientific areas, presented in this Research Topic, confirmed that frailty is an emerging health and societal challenge that requires a holistic and lifecycle-centered approach and involvement of actors from different sectors, including old adults themselves and their families. By adopting this new approach, the possibility arises of offering health and social care that respond to people's real needs and adjust to their circumstances, increasing the acceptability and commitment to the proposed treatment and contributing to its success. We hope that reflection prompted by our Research Topic will relevantly contribute to efforts to involve, empower, and encourage the population to be an active part of this process.

## Author contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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## References

- Bunt, S., Steverink, N., Olthof, J., van der Schans, C. P., and Hobbelen, J. S. M. (2017). Social frailty in older adults: A scoping review. *Eur. J. Ageing* 14, 323–334. doi: 10.1007/s10433-017-0414-7
- Facal, D., Maseda, A., Pereiro, A. X., Gandoy-Crego, M., Lorenzo-López, L., Yanguas, J., et al. (2019). Cognitive frailty: A conceptual systematic review and an operational proposal for future research. *Maturitas* 121, 48–56. doi: 10.1016/j.maturitas.2018.12.006
- Garner, I. W., Varey, S., Navarro-Pardo, E., Marr, C., and Carol, A. (2022). An observational cohort study of longitudinal impacts on frailty and well-being of COVID-19 lockdowns in older adults in England and Spain. *Health Soc. Care* in press. doi: 10.1111/hsc.13735
- Gobbens, R. J., Luijkx, K. G., Wijnen-Sponselee, M., and Th., Schols, J. M. (2010). In search of an integral conceptual definition of frailty: opinions of experts. *J. Am. Med. Dir. Assoc.* 11, 338–343. doi: 10.1016/j.jamda.2009.09.015
- Holland, C., Garner, I., Simpson, J., Eccles, F., Navarro-Pardo, E., Marr, C., et al. (2021). Impacts of COVID-19 lockdowns on frailty and wellbeing in older people and those living with long-term conditions. *Adv. Clin. Experi. Med.* 30, 1111–1114. doi: 10.17219/acem/144135
- Lozupone, M., La Montagna, M., Di Gioia, I., Sardone, R., Resta, E., Daniele, A., et al. (2020). Social Frailty in the COVID-19 Pandemic Era. *Front. Psychiatry* 11:577113. doi: 10.3389/fpsyg.2020.577113
- Maltese, G., Corsonello, A., Di Rosa, M., Soraci, L., Vitale, C., Corica, F., et al. (2020). Frailty and COVID-19: A systematic scoping review. *J. Clin. Med.* 9, 2106. doi: 10.3390/jcm9072106
- Navarro-Pardo, E., Facal, D., Campos-Magdaleno, M., Pereiro, A. X., and Juncos-Rabadán, O. (2020). Prevalence of cognitive frailty, do psychosocial-related factors matter? *Brain Sci.* 10, 968. doi: 10.3390/brainsci10120968
- Pelicioni, P. H. S., Schulz-Moore, J. S., Hale, L., Canning, C. G., and Lord, S. R. (2020). Lockdown during COVID-19 and the increase of frailty in people with neurological conditions. *Front. Neurol.* 11, 103389. doi: 10.3389/fneur.2020.604299
- Rockwood, K., and Mitnitski, A. B. (2007). Frailty in relation to the accumulation of deficits. *J. Gerontol.* 62, 722–727. doi: 10.1093/gerona/62.7.722