Predicting risk and outcomes for frail older adults: preliminary results of an umbrella review of available frailty screening tools

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Introduction: Frailty is an age-related state of high vulnerability to adverse health outcomes after a stressor event, predisposing the individuals to progressive decline in different functional domains and contributing to the onset of geriatric syndromes (Clegg et al., 2013; Fried et al., 2004). Until now, several assessment tools have been developed, being their psychometric properties analyzed in different systematic reviews. This set of evidence needs to be systematized, compared and synthesized through the umbrella review.

Objectives: Summarize the best available evidence from systematic reviews in relation to published screening tools to identify pre-frailty and frailty in older adults, that is: (i) to determine their psychometric proprieties; (ii) to assess their capacity to detect pre-frail and frail conditions against established methods; and (iii) to evaluate their predictive ability.

Methodology: The review methodology followed Joanna Briggs Institute procedures (The Joanna Briggs Institute, 2014). Databases were searched from January 2001 to October 2015. Systematic reviews including older adults in any setting, and aiming to evaluate the reliability and validity of available screening tools for pre-frailty and frailty in older adults, and to assess the utility of these tools to detect or predict risk for the onset/development of frailty or for other adverse events, were eligible for inclusion.

Results: This work is part of the project “664367/FOCUS” funded under the European Union’s Health Programme (2014-2020), which aim to critically reduce the burden of frailty in Europe. Various databases for published and unpublished studies were searched. A total of 345 records were identified after removing duplicates. These were screened by title and abstract and 325 irrelevant records were excluded. Subsequently, 20 full-text articles were reviewed for inclusion criteria, from which 13 were eligible for methodological quality assessment. After this process data will be extracted in order to access instruments’ validity. The evaluation of predictive ability will be based on comparison with Cardiovascular Health Study phenotype model, Canadian study of Health and Aging cumulative deficit model, and Comprehensive Geriatric Assessment.

It is expected that the critical analysis and dissemination of existing evidence will contribute to the definition of guidelines for screening for frail and pre-frail patients and, consequently, for optimization of care by health professionals.
**Conclusions:** The consolidation of the available evidence on existing screening tools for frailty and pre-frailty allows determining of the quality of screening tools in terms of frailty diagnosis and frailty prognosis, being essential to guide intervention practices in the elderly. Early diagnosis of this clinical condition can help improve care for older adults, making possible the minimization of the risk of pre-frail states developing into frail states, and implementation of therapeutic measures in order to attenuate or delay underlying conditions and symptoms, or to ameliorate the impact on independence or healthy and engaged lifestyles.

**Keywords:** frailty, elderly, psychometric properties, umbrella review

**References:**

