Sheffield Hallam University

Examining patterns of frailty and associated factors in older adults

DUNHAM, Margaret

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EBN commentary

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Commentary

Implications for practice and research

- An understanding of cognitive ability, nutritional state, physical factors and social circumstance should inform clinical assessments of frailty risk.
- More longitudinal prospective research is needed to identify factors influencing the development of frailty.

Context

Frailty is a huge public health challenge for the ageing global population. The incidence of morbidity and mortality is greatly increased in the frail oldest old[1]. Frailty is characterised by dramatic, observable physiological changes including loss of muscle, body mass and physiological reserves leading to increased vulnerability to adverse events including infection and falls[2].

Early identification of frailty can enable supportive measures to prevent decline[2]. However, the possibility of reversal of frailty is limited in supporting evidence[3].

Methods

The purpose of this study[4] was to explore patterns of frailty, transitions between frailty states, and to consider the potential for reversing frailty. Specific objectives included identifying rates of frailty and predictive factors related to the changing states of frailty, frail, pre-frail and robust, informed by recognised characteristics of frailty[2].

The research team conducted secondary analysis of health status data obtained from community and nursing home dwelling adults (N=306) aged 60 years or older living in Hong Kong.[4] Using a complex correlational design, data from two annual assessments were analysed to describe participants' frailty characteristics and compare the changes between assessments. Demographic, physical and psychological factors were used to categorise participants as frail, pre-frail and robust. Concurrently obtained data were investigated as possible factors informing the frailty state.

Findings

Transition between frailty states was noted in up to 30% of the participants over one year supporting the potential for intervention in frailty. Participants with higher activity levels were more likely to show improvement. Cognitive function, nutritional state, physical reserve and activity were identified as possible protective factors. Hearing impairment and cognitive deficit were separately considered strong predictors of decline from pre-frail to frail. Analysis of the changes in biopsychosocial factors supports the potential for a predictive model of frailty assessment[5].

Commentary

This study[4] contributes to a small but growing body of evidence of the potential for reversal of frailty. The benefit of early assessment and intervention for the prevention of worsening frailty has been established in other research[6]. This study is informed by Gobbens Frailty Model[5], which proposed a new approach to conceptualising frailty. Gobbens and an expert panel proposed a conceptual framework, a comprehensive biopsychosocial holistic assessment, including physical, psychological and social domains to inform further research, identify risk of frailty and appropriate programmes of Intervention. The potential for social deficits or social networks' influence on frailty is not considered in this paper.

The need for thorough and individualised assessment of frailty risk and current frailty state is evident. The dynamic and complex nature of frailty relates to increased health vulnerability hence any holistic assessment should complement rather than replace a Comprehensive Geriatric Assessment (CGA)[2].

The retrospective health status data[4] accessed was a convenient source of frailty factors; however the findings may not represent the wider Hong Kong ageing population or be transferrable to other ageing populations. The importance of utilising existing health data sets is evident. The limitations of using existing data broadly relate to the potential bias of selection and any missing or incomplete information. More detailed prospective studies, capturing longitudinal data and adequately powered trials with blinding could provide more comprehensive and authoritative data related to frailty indicators and other contributory factors in ageing populations.

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Commentator Details

Dr Margaret M. Dunham

Sheffield Hallam University

m.dunham@shu.ac.uk

No competing interests