Feasibility, appropriateness and meaningfulness analysis of the Sunfrail Tool to the European Portuguese population during cross-cultural adaptation process

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ABSTRACT

Frailty is an age-related condition characterized by increased vulnerability to negative outcomes. To enable informed decision-making and implementation of individually tailored practices for frailty management, it is necessary to develop screening tools that cover different domains of individual functioning, reliably predict future adverse outcomes and are generalizable to healthcare settings other than primary care. The Sunfrail Tool, an easy-to-use nine-item instrument, seems to meet all these requirements. The current study aimed to perform a cross-cultural adaptation of the Sunfrail Tool for the European Portuguese population and to perform the feasibility, appropriateness and meaningfulness analyses of the Sunfrail Tool Portuguese version.

Methods: The process of cross-cultural adaptation was conducted in four-phases (translation, synthesis, back translation and creation of consensual version). To reinforce the content validity, the additional analysis on feasibility, appropriateness and meaningfulness were conducted with end-users (older adults, informal caregivers and health and social care professionals).

Results: The frailty concept was considered suitable for the European Portuguese population. A consensus version was reached by an expert panel after considering the results of two forward and two back-translations. This prefinal version was endorsed to the first author of the original version of the instrument, as recommended by international guidelines. The content validation performed by healthcare professionals (n = 7), patients (n = 18) and informal caregivers (n = 3) showed that the Sunfrail Tool was moderately comprehensible and ambiguous. Five items required changes for cultural adaptation.

Conclusion: The Sunfrail Tool seems to be a promising instrument for the early identification of frailty to be used in the European Portuguese context to inform clinical decisions on preventive responses. However, to enable identification of frail and nonfrail individuals with this tool and ensure effectiveness on pathways activation for frailty management, there is a need to define cut-off points. Guidelines supporting the interview process are also desirable.

Key words: cross-cultural adaptation, frailty, screening tool


Background

Frailty is an age-related condition characterized by increased vulnerability to negative physical, psychological and social outcomes. Recent systematic reviews have shown that frailty is malleable and its early diagnosis may help improve care for older adults.1,2 However, to enable informed decision-making and implementation of personalized practices for frailty management, it is necessary to develop screening tools that cover different domains of individual functioning and reliably predict future adverse outcomes, being generalizable to healthcare settings other than primary care. The Sunfrail Tool seems to be such an instrument. The
Sunfrail Tool is an easy-to-use screening tool that enables early identification of frailty and multimorbidity. The Sunfrail Tool is a nine-item scale with two response options (yes/no). It measures three dimensions of frailty, including biophysical, psychological-cognitive and socioeconomic. It can be administered by different professionals, but also by informal carers within health, social and community settings. The use of the Sunfrail Tool allows the generation of a first alert, leading to the activation of a referral for further medical assessment and diagnostic investigation or prompting a suitable response from the social and community sectors. As a consequence, the opportunity to receive a comprehensive assessment, allowing a timely response and individually tailored interventions, may be created, contributing to the maintenance of the functionality of the older persons for longer. The appropriate monitoring of health and timely responses are relevant to align health systems to the needs of the older population and promote healthcare systems sustainability. So far, there is no Portuguese version of the Sunfrail Tool. As the alternatives existing in Portugal do not cover all the shortcomings pointed out by recent research, it was decided to culturally adapt and analyse feasibility and appropriateness of the Sunfrail Tool with the end-users involvement. In the next phase of this project, we will validate the Sunfrail Tool in the general population and clinical cohorts and disseminate it in different healthcare contexts.

**Aims**

The first aim is to perform the cross-cultural adaptation of the Sunfrail Tool for the European Portuguese population.

The second aim is to perform the feasibility, appropriateness and meaningfulness analyses of the Sunfrail Tool Portuguese version.

**Methods**

The process of cross-cultural adaptation was conducted with the authorization of the authors of the original version of the instrument, and followed the recommendations of international guidelines. The procedures taken included translation of the Sunfrail Tool by two bilingual translators; analysis of the translated contents by a panel of experts to assure conceptual similarity between original and new versions, followed by the synthesis of the translated versions and building of a consensus translation; back translation of the consensus form by two independent translators who were not involved in the first phase; and analysis of the back translation by the author of the original version of the Sunfrail Tool.

To perform the feasibility, appropriateness and meaningfulness analyses, and reinforce the content validity, the consensus version was administrated to end-users, including older adults, informal caregivers and health and social care professionals.

The end-users participating in this study were requested to evaluate whether the Sunfrail Tool was practical and practicable in the context of health or social care. For this purpose, they were invited to answer the questions on the comprehensibility and ambiguity of each Sunfrail Tool item. Furthermore, health and social care professionals were asked to analyse whether the concept assessed by the Sunfrail Tool was relevant for the clinical practice, and older persons were requested to provide information about the meaning of the Sunfrail Tool content. In the next phase of the project, a cross-sectional study aiming to assess construct validity and reliability of the Sunfrail Tool will be performed.

**Results/Discussion**

The adaptation process, consisting of conceptual and item equivalence analyses, was performed by a team with language proficiency, professional expertise in the geriatric health area and experience on testing and measurement concepts. The expert panel, composed by researchers from healthcare and social sciences, considered that the concept of frailty was suitable for the Portuguese population. Two forward and two back-translations were synthesized and compared by the same expert panel and a consensus was reached to produce a prefinal version. The prefinal version was endorsed to the author to ensure that the original meaning of the items was kept.

To reinforce content validation, the assessment of Sunfrail Tool items’ comprehensibility and ambiguity was considered. The instrument was tested in a sample of healthcare professionals (n = 7), patients (n = 18) and informal caregivers (n = 3). The translated version of the Sunfrail Tool was considered by end-users participating in this study as moderately comprehensible and ambiguous. Five items required changes for cultural adaptation.

**Conclusion**

The Sunfrail Tool seems to be a promising instrument for the early identification of frailty to be used in the European Portuguese context. It may inform clinical decisions on preventive responses. However, there is a need to define cut-off points that allow discrimination between frail and nonfrail older adults in the general population.
population and specific clinical populations, and ensure the activation of the correct pathways for successful frailty management. Another crucial point is to develop a guide to support the interview process and minimize performance bias.

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Conflicts of interest
The authors report no conflicts of interest.

References