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Review article

Cross-cultural validation of the falls efficacy scale international in elderly: Systematic literature review

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ABSTRACT

The aim of this study is to describe the psychometric properties of cultural adaptations of the Falls Efficacy Scale International (FES-I) in the elderly dwelling in the community. A systematic literature review was performed according to the research question: What are the psychometric properties of the FES-I in the elderly dwelling in the community in different cultural backgrounds? The Population, Interest, Context (PICo) strategy was used for inclusion criteria—Population: elderly; Interest area/intervention: psychometric properties of the FES-I; Context: dwelling in the community in various cultural settings. The sample was made up of 10 articles. Metric properties have been evaluated by the criteria of validity, reproducibility, reliability, and responsiveness. The FES-I is considered acceptable, understandable to measure the fear of falling in the elderly, valid, reliable, and comparable cross-culturally, so it is recommended in rehabilitation research, clinical trials, clinical practice, and in fall-prevention programs in elderly.

1. Introduction

The increased longevity of people poses new challenges to health policies and scientific research priorities. Population aging is a reality ever more present in most countries, leading transitions of society itself.

The increasing number of elderly favors discussion with regard to impairments related to this age group, which highlights the occurrence of falls.[1] It is understood as an unintended drop event, which results in changing the individual position, to a lower level in relation to its initial position.[2]

In a study performed in Brazil,[3] the prevalence of a fall in a 6-month period was 33.3% in a sample of 240 elderly people who lived in the community, of whom 25% had one or two falls and 6.3% had three or four falls. The greatest fall prevalence was found in women, the elderly, and the young, and most occurred in the yard and in the bathroom. The intrinsic factors that stood out in the cause of the falls in the elderly were altered balance, muscle weakness, dizziness/vertigo, and difficulty in walking. The extrinsic factors were: slippery surfaces, uneven floors or holes, high step and/or tread gap, objects on the floor, and throw rugs. Regarding the consequences, the elderly reported fear of falling again, anxiety, and depression.[3] Nurses need to be aware of the physical and physiological changes that come from the aging process, understanding the fragility of the elderly, but also possible changes in family dynamics. It is important to know how the elderly feel in their context because a situation of dependence and reduced functional capacity can have an impact on people's lives as it involves biological, physical, emotional and social issues.[4] Reduced muscle strength and flexibility associated with aging, as well as postural changes, may lead to the fear of falling, even though they had never experienced a fall.[5] The fear of falling causes a loss of confidence in performing daily tasks, restrictions on social

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activities, and increased dependence that can lead to deconditioning.[6] Research demonstrates that the intensity of the fear of falling is associated with physical frailty, the decline in activities of daily living (ADL), and a history of previous falls. The fear of falling is a predictor of institutionalization in nursing homes, both in people who have fallen and in those who have never fallen.[5]

The falls efficacy scale (FES) was developed to evaluate the fear of falling while carrying out 10 tasks related to ADL.[7] In 2005 the FES international (FES-I) was developed with 16 items, because the FES of Tinetti et al[7] did not represent a direct relationship between the fear of falling and self-efficacy.[8] Items in the FES are related to basic ADL, mostly related to vulnerable elderly, and do not evaluate the fear of falling when in social activities or life. Due to these criticisms, neither the items in the original FES, nor the rating scale, whose terms were substituted *confident* with *worried* were kept.[5] The 16 FES-I items are: cleaning the house (e.g., wiping with a cloth, vacuuming, or dusting); dressing or undressing; preparing simple meals; bathing or showering; shopping; sitting or rising from a chair; walking up or down stairs; walking in the neighborhood; taking something above the level the head or from the ground; picking up the phone; walking on a slippery surface (e.g., wet ground); visiting a friend or relative; walking in crowded places; walking on an uneven surface (with stones or holes) up or down a slope; and attending a social event (e.g., religious act, family gathering, or club meeting).[9] The total score varies between 16 (not worried) and 64 points (very worried).[8]

Using a culturally adapted and validated instrument of measurement in research ensures the reliability of results,[10–12] but also contributes to clinical reasoning and to an accurate nursing diagnosis.

The objective of the study is to describe the psychometric properties of FES-I in the elderly dwelling in the community when submitted to cultural adaptations. The purpose is to contribute to the knowledge about the instrument and its cultural adaptation in different countries, which will enable the comparison of studies regarding the fear of falling in the elderly residing in a community context.

2. Methods

A systematic literature review was conducted to identify, select, evaluate, in a critical way, and synthesize research evidence in order to solve a certain problem of a particular clinical practice, defined for the sake of concrete research.[13–15]

The guidelines of the Joanna Briggs Institute[16] were considered from the PICo strategy for a research question, which was defined as: what are the psychometric properties of the FES-I in elderly residents in different cultural settings? Each dimension of PICo contributed to the definition of the inclusion criteria—Population: elderly; Interest area/intervention: psychometric properties of the FES-I; and Context: dwelling in the community in various cultural settings. The search was conducted in April 2015 in EBSCOhost platform, in the databases MEDLINE Complete and CINAHL Complete. The descriptors were validated on the platform Descriptors of Health Sciences (DESC) with the following search strategy: (v) AND (reliability) AND (accidental falls) AND (FES-I OR falls efficacy scale international).

The search of the terms was limited to an abstract. Studies published in the past 10 years were included, particularly those published from January 2005 (1st publication of the FES-I) to January 2015. Studies in Portuguese, English, and Spanish, available in full text and with cohort and/or descriptive quantitative design were included. Studies that did not present at least one psychometric property (reproducibility, validity, and responsiveness) were excluded. The search was conducted independently by two researchers and the selection of studies followed the same method, with the sequence suggested by the international guidelines of Prisma.[17] The agreement between researchers was taken into account. To allow assessment of the viability criteria, appropriateness, significance, and effectiveness, the Joanna Briggs Institute criteria were applied regarding cohort studies and descriptive studies in order to support the decision-making of items to include in the systematic literature review.[16] No article was excluded at this stage (Figure 1), because all had at least 75% of the criteria.[16]

The criteria of the Registered Nurses' Association of Ontario[18] were considered for the classification of the levels of evidence of each paper.

In evaluating the metric properties of the rating scales of the risk of falling the validity criteria (content, construct, concurrent and discriminant), reproducibility (inter- and intraobserver) and reliability (internal reliability) and responsiveness were used.[10–12]

3. Results and discussion

Of the 10 articles that compose this sample, the country of origin was identified as: UK[8]; Germany, The Netherlands, and the UK[19];

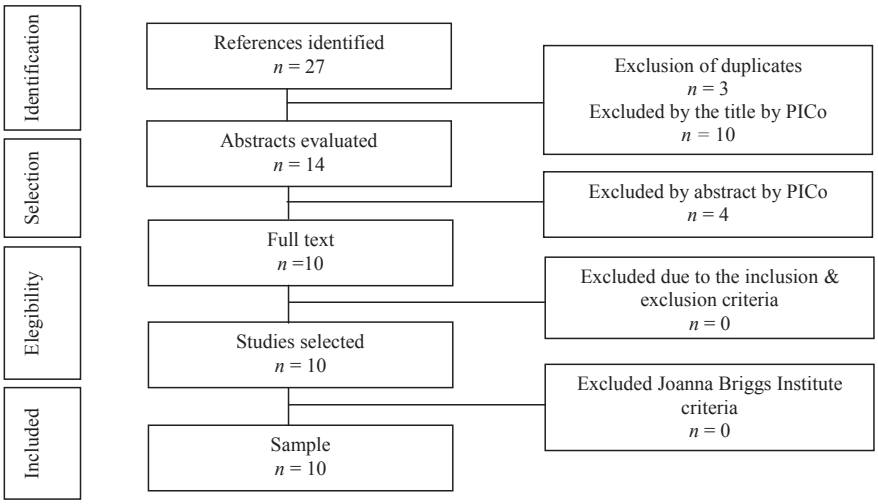

Figure 1. Identification, analysis and selection of the articles.