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Elderly Falls



Methodology

Validating an evidence-based, self-rated fall risk questionnaire (FRQ) for older adultsLaurence Z. Rubenstein^{a, b, d}, , Rebecca Vivrette^b, Judith O. Harker^b, Judy A. Stevens^c, B. Josea Kramer^d^a Donald W. Reynolds Department of Geriatric Medicine University of Oklahoma College of Medicine, 921 NE 13th Street, VAMC (11 G), Oklahoma City, OK 73104, USA^b Geriatric Research, Education & Clinical Center (GRECC), Greater Los Angeles VA Medical Center (11E), 16111 Plummer Street, Sepulveda, CA 91343, USA^c Epidemiologist, National Center for Injury Prevention & Control, Centers for Disease Control & Prevention, 4770 Buford Highway, MS F-62; Atlanta, GA 30341, USA^d UCLA School of Medicine and GRECC, Greater Los Angeles VA Medical Center, 16111 Plummer Street (11E); Sepulveda, CA 91343, USA<http://dx.doi.org/10.1016/j.jsr.2011.08.006>, [How to Cite or Link Using DOI](#)**Abstract****Background**

Falls are a common, serious, and often unrecognized problem facing older adults. The objective of this study was to provide an initial clinical and statistical validation for a public health strategy of fall risk self-assessment by older adults using a Fall Risk Questionnaire (FRQ).

Methods

Adults age 65+ (n = 40) were recruited at a Los Angeles Veterans Affairs (VA) medical facility and at a local assisted living facility. Participants completed the FRQ self-assessment and results were compared to a "gold standard" of a clinical evaluation of risks using the American/British Geriatrics Society guidelines to assess independent predictors of falls: history of previous falls, fear of falling, gait/balance, muscle weakness, incontinence, sensation and proprioception, depression, vision, and medications. For the comparison, we used an iterative statistical approach, weighing items based on relative risk.

Results

There was strong agreement between the FRQ and clinical evaluation (kappa = .875, p < .0001). Individual item kappa values ranged from .305-.832. After dropping one FRQ item (vision risk) because of inadequate agreement with the clinical evaluation (kappa = .139, p = .321), the final FRQ had good concurrent validity.

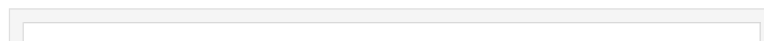
Conclusions

The FRQ goes beyond existing screening tools in that it is based on both evidence and clinical acceptability and has been initially validated with clinical examination data. A larger validation with longitudinal follow-up should determine the actual strength of the FRQ in predicting future falls.

Keywords

Falls; Fall prevention; Geriatrics; Risk assessment

Figures and tables from this article:



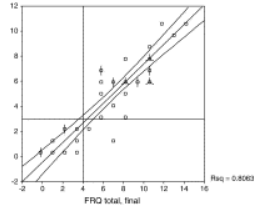


Fig. 1. Geriatrician clinical exam score plotted versus FRQ total risk score. Scatter plot with regression line and 95% confidence interval. Symbols: circle = 1 case, circle with 2 lines = 2 cases, circle with 3 lines = 3 cases. Fall risk cutpoints are indicated at 4 for FRQ and 3 for clinical exam. Linear regression R² value is shown.

[Figure options](#)

Table 1. Sample age group with FRQ and clinical exam item outcomes (N = 40).



* Compound analgesics (e.g., Tylenol PM, Tylenol + codeine); Simple analgesics (e.g., aspirin, Tylenol (plain), Gabapentin).

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Table 2. Comparison of FRQ items and clinical exam items.



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Table 3. Summary of iterative process to scoring algorithm development.



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