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Patient-Reported, Not Performance Based, Outcome Measures Are Correlated With Future Falls in Community Dwelling Older Adults

Alex Carr SPT
University of Puget Sound

Hannah Johnson SPT
University of Puget Sound

Elise Whisler SPT
University of Puget Sound

Holly Roberts PT, PhD
University of Puget Sound

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Alex Carr, SPT; Hannah Johnson, SPT; Elise Whisler, SPT; Holly Roberts, PT, PhD

Purpose

To determine whether balance confidence, fear of falling avoidance behaviors, or performance on high-level mobility outcome measures can predict falls in community-dwelling older adults.

Background

- One-third of older adults (≥65 years) fall at least once a year
- Fear of falling, fear avoidance behavior, and physical factors are associated with increased falls
- Commonly used outcome measures like the Berg Balance Scale, Dynamic Gait Index, and Timed Up and Go Test have ceiling effects for higher functioning community dwelling older adults

Methods

Initial Testing

- 89 participants (76 ± 7 years, 54 female, 1.10 ± 2.46 falls in last 12 months) completed the initial screening and **Activities-specific Balance Confidence Scale (ABC), Fear of Falling Avoidance Behaviors Questionnaire (FFABQ), Functional Gait Assessment (FGA), and Community Balance & Mobility Scale (CB&M)**

Data Collection

- Number of falls were reported for 6 months after initial testing

Data Analysis

- Spearman's rho, a Point-Biserial Correlation, and Receiver Operating Curves were used to analyze the relationship of the selected outcome measures, past falls, and future falls

Results

Table 1: Correlations between outcome measures and future falls

	Outcome Measure	Correlation to Falls	P value	Significant
Performance based:	FGA	-0.0152	0.156	No
	CB&M	-0.124	0.245	No
Patient reported:	ABC	-0.235	0.022	Yes
	FFABQ	0.286	0.019	Yes
	History of Falls	0.323	0.002	Yes

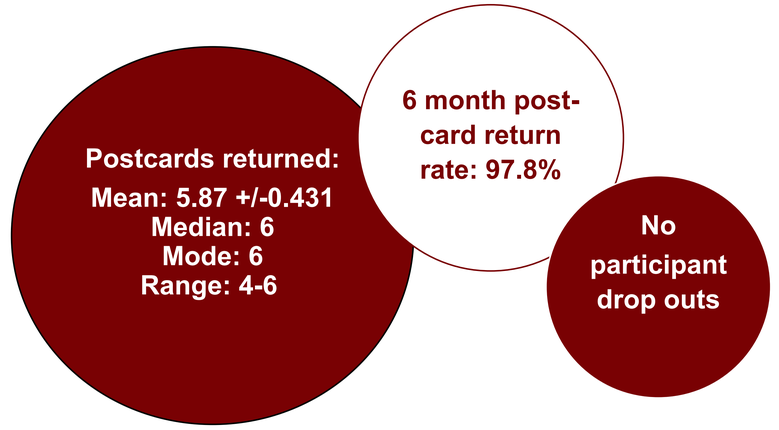
Table 2: Area under the curve (AUC) for predicting falls using selected outcome measures

Outcome Measure	Area Under the Curve	P value
FGA	0.681	0.063
CB&M	0.605	0.100
ABC	0.632	0.038*
FFABQ	0.655	0.015*

Table 3: Cutoff scores for predicting future falls

Outcome Measure	Cutoff Score for Predicting Falls	Sensitivity	Specificity
ABC	96%	79%	66%
FFABQ	1.50	79%	55%

Return Rate



Conclusion

No single outcome measure was found to have a strong correlation with falls in community-dwelling older adults. The ABC, FFABQ, and history of falls were weakly correlated with future falls. A cutoff score of 96% on the ABC and 1.50 on the FFABQ had adequate sensitivity, but low specificity for predicting falls.

Clinical Relevance

- Our findings support previous research suggesting that falls are multifactorial
- Clinicians should ask patients about fall history and measure balance confidence and fear of falling avoidance behaviors to assist with selecting interventions to reduce fall risk