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ORIGINAL RESEARCH

Construct and criterion validity of the functional gait assessment—Brazil in community-dwelling older adults

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Abstract
Background: The functional gait assessment (FGA) is a reliable instrument to evaluate walking balance in the Brazilian older population. However, other measurement properties need investigation.
Objective: To determine the construct and criterion validity of the FGA-Brazil and its ceiling and floor effects.
Methods: Sociodemographic, clinical, and anthropometric data were collected from 126 older adults. Participants completed the Mini-mental state examination followed by the FGA-Brazil, Berg balance scale (BBS), gait speed, and the Falls Efficacy Scale-International. Six months later, the participants were interviewed by telephone about their fall history. Exploratory factor analysis was used to determine the structural validity. We also determined the construct validity of the FGA-Brazil, using hypothesis testing, by investigating the differences between groups using the Mann–Whitney U test. Criterion validity was determined using the Spearman correlation between the FGA-Brazil and the other balance and gait measures, and using the Receiver Operator Characteristic curve.
Results: Participants' mean age was 69.3 ± 7.4 years, and 84 (69.4%) were female. Factor analysis resulted in two factors explaining 53.3% of the total variance. Moderate and high significant

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correlations were found between the FGA-Brazil and gait speed (r = 0.65) and BBS (r = 0.80). A significant difference in the FGA-Brazil median score between older adults with low and high concern about falls was observed. The cutoff score recommended for predicting falls was 22 or less. No ceiling and floor effects were observed.
Conclusion: We recommend the FGA-Brazil to determine the risk of falls in community-dwelling older adults.

Introduction

The Functional Gait Assessment (FGA) is a standardized 10-item scale for evaluating an individual's ability to maintain balance while walking.[1–3] It was developed as a modified version of the Dynamic Gait Index (DGI) to clarify instructions for some items, to improve the reliability of the test items, and to reduce the observed ceiling effect for patients with vestibular disorders.[4–6]

The FGA was recently, translated to Brazilian Portuguese[7] and cross-culturally adapted.[3] Inter- and intra-rater reliability, standard error of measurement (SEM), and internal consistency of the FGA-Brazil were assessed in a sample of older adults. The results showed excellent inter- and intra-rater reliability (intraclass correlation coefficient – ICC > 0.90), low SEM (from 1.03 to 1.52), and good internal consistency (Cronbach's alpha = 0.858).[7] However, other measurement properties of the FGA-Brazil as well as the cutoff score and ceiling and floor effects were not investigated. This information is critical to improving rehabilitative interventions and patient outcomes.

Therefore, the goal of the present study was to determine the construct and criterion validity of the FGA-Brazil in addition to the ceiling and floor effects in older adults living in the community. Construct validity reflects the ability of an instrument to measure the construct of interest, and criterion validity describes whether the proposed instrument can be considered as a reasonable ''gold standard''.[8] Such knowledge will determine if the FGA-Brazil is a useful clinical measure of postural stability during various walking tasks.

Methods

Study design

This study followed the recommended taxonomy and definition from the COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN).[8] The study was conducted between May and September 2018 at the ambulatory of *Faculdade de Ciências Médicas de Minas Gerais*, Belo Horizonte, Brazil, and received approval from the Ethics Committee of the same institution (CAAE 71178417.8.0000.5134). All participants signed the informed consent.

Participants

Older adults waiting for medical care at the ambulatory care center were invited to participate on the same day for a single testing session. The inclusion criteria were men and women aged 60 years or older, living in the community, able to ambulate with or without assistive devices, able to stand up independently, and able to understand verbal commands. The exclusion criteria were cognitive impairment detectable by the Mini-mental state examination (MMSE),[9] neurological and orthopedic sequelae, and cardiorespiratory problems that could prevent gait.

The sample size was based on COSMIN[8] that states that 100 participants or more should be included for the study to be considered of very good methodological quality. According to this guideline, for structural validity using factor analysis, the number of participants determined is 7 times the number of instrument items and at least 100 participants.

Measures

FGA-Brazil

Two trained physical therapists applied the FGA-Brazil in a group of community-dwelling older adults. Participants were asked to ambulate over a delimited area of 6 m in length by 30 cm in width. The instrument consists of 10-items: gait level surface, changes in gait speed, gait with horizontal head turns, gait with vertical head turns, gait and pivot turn, step over obstacles, gait with narrow base of support, gait with eyes closed, ambulating backwards, and steps.[10] Each item was demonstrated to the participants by one of the raters to facilitate understanding and was graded on a four-point ordinal scale ranging from 0 (severe impairment), 1 (moderate impairment), 2 (mild impairment), to 3 (normal), with a maximum score of 30 points. The higher the score, the better the participant's postural stability during gait.[10]

Berg balance scale (BBS)

The BBS is a clinical balance test that evaluates the individual's ability to perform 14 day-to-day activities.[11] The items are measured on a ordinal scale ranging from 0 to 4 points (0 = incapable of performing the activity to 4 = performs the activity independently) with a maximum score of 56.[11]

Gait speed

Participants walked a distance of 6 m at their usual speed. The timer was activated when the participant's foot crossed a line marking the beginning of a 4-m length and deactivated when the foot crossed a line marking the end of the 4 m. The first and last meter of the 6-m distance were discarded. Gait speed (m/s) was obtained dividing the distance (4 m) by the time (in seconds) spent to perform the task.

Falls Efficacy Scale-International (FES-I)

The FES-I assesses the individual's concern about the possibility of falling during the performance of 16 different activities.[12] Each item of the FES-I can be scored from 1 (not at all concerned) to 4 (very concerned), ranging from 16 (absence of concern) to 64 (extreme concern).[12]

Falls

Falls were assessed both retrospectively and prospectively. Retrospective falls were assessed during the initial interview, by asking how many times the participant had fallen in the previous 12 months. Six months after data collection, participants were contacted by phone and asked about the occurrence of falls, when falls were reported, the circumstances and consequences of the fall event(s) were obtained. A fall was defined as unintentionally coming to the ground or some lower level.[13] The loss of consciousness and falling as a consequence of sustaining a violent blow were not considered as fall.[13]

Experimental procedure

Sociodemographic and clinical characteristics were initially investigated. Subsequently, the participants performed the MMSE, FGA-Brazil, BBS, gait speed, and FES-I-Brazil. Six months after data collection, participants were contacted by phone to ask about occurrence of falls in that time period. A third assessor, blinded about the results of the initial tests, conducted the telephone calls.

Data analysis

For analysis of structural validity, principal component analysis with varimax rotation was applied and extraction of factors was based on Eigenvalues >1. The adequacy of the factor analysis was tested by the Kaiser-Meyer-Olkin test (KMO) and the Bartlett's sphericity test. Correlations above 0.50 in the KMO test and values of p <0.05 in the Bartlett's sphericity test indicate adequacy of the data for this analysis.

For analysis of hypothesis testing, we investigated the differences between groups using the Mann–Whitney U test. For this purpose, we divided the sample into two groups based on the FES-I-Brazil cutoff score of $\leq$20 for low concern and >20 for high concern about falls.[14] Our hypothesis was that the FGA-Brazil would be able to differentiate the groups with low and high concern about falls, since low and high concern about falls indicate reduced and increased risk of falls, respectively.

Criterion validity was measured by the relationship between the FGA-Brazil and the BBS and the gait speed test using Spearman correlation coefficient. Values from 0.0 to 0.25 indicate no or little correlation; 0.26–0.50 indicate good correlation; 0.51–0.75 indicate moderate correlation; and 0.76–1.0 indicate high correlation. Moderate to high positive associations between the FGA-Brazil and the BBS and the gait speed test were hypothesized based on previous studies conducted with older adults and subjects with other health conditions, such as Parkinson disease and stroke.[1,2] We hypothesized that the association between the FGA-Brazil and the BBS would be stronger than the association between the FGA-Brazil and the gait speed test.

A Receiver Operator Characteristic (ROC) curve was also used to determine the extent to which a score on a test predicts scores on some criterion measure, and the FGA-Brazil cutoff score. For comparison, we conducted a ROC curve with the BBS and the gait speed test. The dichotomous response of the participants in relation to falls (0: no faller, $\geq$1: fallers) that occurred during the six months period after data collection was considered as the reference variable. The data point closest to the upper left corner of the curve (i.e., value that maximized the sum of sensitivity and specificity) was chosen as the optimal threshold for discrimination, with the area under the ROC curve (AUC) reflecting the measure's accuracy. An AUC > 0.7 was considered sufficient for discrimination.[15] Based on the results of previous studies,[16–18] our hypothesis was that all three tests would have an acceptable predictive ability for falls (AUC > 0.7). Moreover, due to the range of challenging gait tasks within the FGA, we hypothesized that it would have better accuracy in fall prediction compared with the BBS and the gait speed test.

A ceiling effect was considered present if 15% of the sample had a score equal to 30 and a floor effect if 15% had a score equal to 0 (zero).[19] Statistical analysis was performed using the SPSS software, version 25.0, with a significance level of 5%.

Results

One hundred and twenty one community-dwelling older adults (84 women) participated in the study. The sociodemographic, anthropometric, and clinical characteristics of the participants are described in Table 1. The mean time for completing the FGA-Brazil was 10 min and 25 min for the remaining tests.

For the structural validity, exploratory factor analysis showed adequacy for the data with a KMO of 0.83, and the Bartlett's test rejected the null hypothesis that the correlation matrix is an identity matrix (p < 0.001). Two factors were extracted that together explained 53.3% of the total variance (Table 2). The results showed that only items 3 (gait with horizontal head turns) and 4 (gait with vertical head turns) measured equal dimensions, but were strongly associated with Factor 2.

For the hypothesis testing, the sample was divided into two groups, one group with low concern (n = 54) and the other with high concern (n = 67) about falls. Result from

Table 1 Descriptive data of the participants (N = 121).

Variables	Total sample (N = 121)	Female (N = 84)	Male (N = 37)
Sociodemographic and anthropometric data, mean ± SD			
Age (years)	69.3 ± 7.4	69.0 ± 0.8	69.9 ± 1.3
Mass (kg)	69.7 ± 10.9	66.2 ± 1.1	77.5 ± 1.6
Height (m)	1.58 ± 0.1	1.61 ± 0.1	1.69 ± 0.1
Marital status, n (%)			
Widowed/widower	34 (28.1)	29 (34.5)	5 (13.5)
Single	17 (14.0)	14 (16.7)	3 (8.1)
Separated/divorced	14 (11.6)	10 (11.9)	4 (10.8)
Married	56 (46.3)	31 (36.9)	25 (67.6)
Schooling, n (%)			
No formal schooling	4 (3.3)	4 (4.8)	–
Elementary school	90 (74.4)	63 (75.0)	27 (73.0)
High school	17 (14.0)	11 (13.1)	6 (16.2)
College	10 (8.3)	6 (7.1)	4 (10.8)
Health-related variables			
Number of chronic diseases, n (%)			
0	17 (14.0)	10 (11.9)	7 (19.9)
1	36 (29.8)	24 (28.6)	12 (32.4)
2	29 (24.0)	16 (19.0)	13 (35.1)
≥3	39 (32.2)	34 (40.5)	5 (13.5)
Physical activity, n (%)			
No	84 (69.4)	61 (72.6)	23 (62.2)
Yes	37 (30.6)	23 (27.4)	14 (37.8)
Number of falls in the previous 12 months, n (%)			
0	76 (62.8)	43 (51.2)	33 (89.2)
1	23 (19.0)	19 (22.6)	4 (10.8)
2	11 (9.1)	11 (13.1)	–
≥3	11 (9.1)	11 (13.1)	–
FGA-Brazil (0–30)	21.7 ± 4.7	20.4 ± 4.5	24.0 ± 4.7
MMSE (0–30)	26.3 ± 3.6	26.1 ± 0.42	26.5 ± 0.51
FES-I (16–64)	24.4 ± 8.1	26.3 ± 0.83	19.9 ± 1.2
BBS (0–56)	52.3 ± 3.9	51.7 ± 4.1	54.2 ± 2.5
Gait speed (m/s)	0.99 ± 0.2	0.95 ± 0.02	1.17 ± 0.10

Abbreviations: SD, standard deviation; FES-I, Falls Efficacy Scale-International; FGA-Brazil, functional gait assessment Brazil; MMSE, Mini-mental state examination; BBS, Berg balance scale.

the Mann–Whitney *U* test showed that there was a significant difference (mean difference = −11.8, 95% CI = −14.0, −9.7, $p < 0.001$) in scores between the groups, indicating that the FGA-Brazil was effective in differentiating the groups.

For the criterion validity, a high and significant correlation ($r = 0.80$; $p < 0.001$) was found between the FGA-Brazil and the BBS, and a moderate and significant correlation ($r = 0.65$; $p < 0.001$) between the FGA-Brazil and the gait speed test.

The ROC curve results were obtained from 116 participants. Data from 5 participants were lost due to contact failure. Of those, 27 (21.6%) reported falls and the related circumstances were: tripping on a step or sidewalk (n = 10), slipping in the bathroom (n = 2), slipping on a carpet in the house (n = 1), stepping in a hole (n = 1), stepping on a rock (n = 1), stepping on own slipper (n = 1), pain in the legs (n = 1), falling when running (n = 1), falling while carrying shopping bags (n = 1), falling when sweeping (n = 1), falling when raising fast (n = 2), and falling when bending forward to water a plant (n = 1). Two participants (8%) sustained a wrist fracture due to trying to protect themselves when falling. Four participants (16%) could not explain the reason of the falls.

The ROC curve showed an AUC of 0.923 (95% confidence interval = 0.86, 0.97; Std. Error = 0.029, $p < 0.001$), 0.848 (95% confidence interval = 0.76, 0.94; Std. Error = 0.045; $p < 0.001$) and 0.735 (95% confidence interval = 0.63, 0.84; Std. Error = 0.054; $p < 0.001$) for the FGA-Brazil, BBS, and gait speed, respectively, indicating that those instruments are able to identify individuals at risk for future falls (Fig. 1). The optimum cutoff score that maximizes sensitivity and specificity for the FGA-Brazil was ≤17/30; for the BBS was ≤49/56, and for gait speed ≤0.94 m/s. Based on this criterion, the FGA-Brazil and gait speed were able to identify 20/27 fallers and the BBS 17/27; however, the FGA-Brazil

Table 2 Structural construct validity of the functional gait assessment-Brazil (N = 121).

FGA items	Factor 1	Factor 2
Item 1 – Gait level surface	0.621	0.306
Item 2 – Change in gait speed	0.592	0.124
Item 3 – Gait with horizontal head turns	0.223	0.818*
Item 4 – Gait with vertical head turns	0.152	0.864*
Item 5 – Gait and pivot turn	0.589	0.272
Item 6 – Step over obstacle	0.709	0.160
Item 7 – Gait with narrow base of support	0.669	0.218
Item 8 – Gait with eyes closed	0.495	0.384
Item 9 – Ambulating backwards	0.582	0.385
Item 10 – Steps	0.819	0.046
Total variance explained	53.3%	
Bartlett's Test	<0.001	
Kaiser-Meyer-Olkin test (KMO)	0.833	

*Note:** items 3 and 4 contribute more to Factor 2.

Table 3 Ability of the functional gait assessment (FGA-Brazil) test, Berg balance scale, and gait speed to predict future falls using different cut-off scores for each test (N = 116).

AUC	FGA-Brazil score	Sensitivity 95% CI	Specificity 95% CI	LR +	LR −	N = 27 Fallers	N = 89 Non-Fallers
0.923	≤17	74.1 53.7, 88.9	95.5 88.9, 98.8	16.5	0.27	20	4
	≤18	77.8 57.7, 91.4	87.6 79.0, 93.7	6.29	0.25	21	11
	≤19	77.8 57.7, 91.4	84.3 75.0, 91.1	4.94	0.26	21	14
	≤20	85.2 66.3, 95.8	80.9 71.2, 88.5	4.46	0.18	23	17
	≤21	88.9 70.8, 97.6	75.3 65.0, 83.8	3.60	0.15	24	22
	≤22	96.3 81.0, 99.9	67.4 56.7, 77.0	2.96	0.055	26	29
	≤23	96.3 81.0, 99.9	46.1 35.4, 57.0	1.79	0.080	26	48
	≤24	100.0 87.2, 100.0	38.2 28.1, 49.1	1.62	0.00	27	55
	BBS score						
0.848	≤49	63.0 42.4, 80.6	92.1 84.5, 96.8	8.01	0.40	17	7
	≤55	96.3 81.0, 99.9	31.5 22.0, 42.2	1.40	0.12	26	61
	Gait speed (m/s)						
0.735	≤0.94	74.1 53.7, 88.9	65.2 54.3, 75.0	2.13	0.40	20	31
	≤1.01	81.5 61.9, 93.7	56.2 45.3, 66.7	1.86	0.33	22	39

Abbreviations: AUC, area under the curve; BBS, Berg balance scale; CI, confidence interval; LR+, positive likelihood ratio; LR−, negative likelihood ratio; N, number; data in bold means maximum sensitivity and specificity.

had only 4/89 false positives, the BBS had 7/89, and gait speed had 31/89. Increasing the sensitivity of the FGA-Brazil to 96.3% and decreasing the positive likelihood ratio (LR+) to 2.96, resulted in the identification of 26/27 older adults true fallers, and 29/89 non-fallers, with a cutoff score of ≤22. Similarly, increasing the sensitivity of the BBS and gait speed, resulted in the identification of 26/27 and 22/27 true fallers, and 61/89 and 39/89 non-fallers (Table 3).

None of the participants had a score equal to 0 (zero) and only 2 (1.7%) older adults scored 30. Therefore, the FGA-Brazil did not present floor and ceiling effects in the sample studied.

Discussion

Our results demonstrated that the FGA-Brazil presents good structural validity and moderate to high correlations with other balance and gait clinical measures, and is able to discriminate between older adults with low and high concern about falls. A cutoff score of ≤22 on the FGA-Brazil provided optimum validity for predicting falls, and no ceiling and floor effects were observed. Therefore, we recommend the FGA-Brazil as a clinical tool to investigate risk of falls in older Brazilian adults.

Results of the principal component analysis indicate that the FGA-Brazil is composed of two dimensions. Eight of the FGA items (items 1, 2, and 5–10) measured the construct of balance while walking, but items 3 and 4 (gait with horizontal head turns and gait with vertical head turns) measured more complex dynamic head-body movements during gait. Similar results were reported by Wrisley et al.[10] that found 3 factors in individuals (n = 6) with vestibular disorders. However, the small sample size from the original study would make it difficult to interpret the different factors. In our study, we believe that head turns might have influenced some of the individual's balance while walking. It is known that head turns activate the vestibular system[20]; thus, we suspect these items may identify a subset of patients with postural control impairment.[3,10] Therefore, we would not recommend dropping items 3 and 4 because it would identify a specific subgroup of older adults with postural impairment and prone to falls and could also affect the ceiling effect of the scale.[10] To test the dimensionality of a scale, the factor structure extracted from the model should be tested at a different time point in a longitudinal study or, ideally, on a new sample.[21] Tests of dimensionality determine whether the measurement of items and the factors are the same across two independent samples or within the same sample at different time points. Such tests can be conducted using an independent cluster model, confirmatory factor analysis, bifactor modelling, or measurement invariance.[21,22] Therefore, testing the dimensionality of the FGA-Brazil is beyond the scope of this study. We recommend that future studies should test the FGA-Brazil on diverse populations and longitudinally before the single dimensionality of the scale can be determined. If the unidimensionality of the scale cannot be established, we recommend studies to create a separate score for questions 3 and 4 to highlight the complexity of these items in measuring balance while walking.

Our hypothesis testing that the FGA-Brazil would be able to differentiate older adults highly concerned about falls from a group with low concern about falls was confirmed. Evidence from the literature shows that fear of falling and falls are strongly correlated; although, it is unknown which one comes first. A person who has one of these outcomes is at higher risk of developing the other.[23] Such result indicates that the FGA-Brazil is an effective and valid tool to classify risk of falls in older adults.

Our study demonstrated that FGA-Brazil had a stronger correlation with BBS, evidencing that these scales measure a similar construct (i.e., balance), while the correlation with gait speed was lower, showing that this clinical test measures a related (but not the same) construct. Our result is consistent with previous studies that also found a high correlation between the FGA and BBS scores in older adults living independently in the community ($r = 0.84$)[24] as well as in other populations, such as individuals with Parkinson disease ($r = 0.85$)[25] and post-stroke ($r = 0.83$).[7] But contrary to our result, a previous study found a high correlation with gait speed ($r = 0.80$).[1] This result might be related to differences in participants' characteristics and methodology. This particular study was conducted in persons after stroke and used the 10-m walk test.[1]

In our study, the FGA-Brazil was able to predict risk of falls in older Brazilian adults with a cutoff score that maximizes sensitivity and specificity of ≤17. The AUC was greater for the FGA-Brazil compared to the BBS and gait speed. Independent of the criterion used, the FGA-Brazil is the best test to identify more true positive fallers and less false positive fallers in this group of community-dwelling older adults. When determining the appropriate cutoff score, the sensitivity and specificity of the test must be considered. Maximizing the specificity of the test increases the false negative rate and may result in the omission of individuals who are at risk of falling. Increasing the sensitivity will lead to an increase in the number of false positives, detecting non-fallers. While failing to identify older adults at risk of falls is undesirable, unnecessarily treating individuals with no real risk for falls leads to an increase in financial expenses, as well as cost and time of the older adults and likely their caregivers. A cutoff ≤17 maximizes sensitivity and specificity, and was able to identify 74% of older fallers. In addition, the LR + was 16.48. A LR+ >1 corroborates the presence of the fall condition; and a LR− closer to 0, as found with a cutoff ≤17, of 0.27, means that the probability of the falling condition in the presence of negative test result is lower. On the other hand, by increasing the sensitivity of the test to the cutoff of ≤22, we reduce the LR+ (2.96) and increase the risk of identifying older adults without the condition. However, cutoff score ≤22 was able to identify 26/27 true positives and 29/89 false positives. Therefore, we recommend using the cutoff score ≤22 to detect a higher number of older adults with fall risk and avoid the serious consequences of falling in this population.

In a study conducted with 35 community-dwelling older adults aged 60–90 years, Wrisley and Kumar[18] found that the FGA is effective in predicting falls (AUC = 0.92) with an optimum cutoff score of ≤20/30 with sensitivity and specificity of 100% and 83%, respectively. In a study including individuals with Parkinson, Yang et al.[24] showed that the FGA could predict falls within the subsequent six months (AUC = 0.84), sensitivity of 80.6% and specificity of 80.0%, with a cutoff score of ≤18. Thus, our findings are consistent with the existing literature showing that the FGA-Brazil is a very helpful tool for predicting falls with high accuracy in an older population.

The different FGA cutoff scores between the studies may be explained, at least partially, by the differences in subject characteristics and methodology, such as sample sizes, definition of faller, and monitoring of the falls during follow-up. For example, in our study, participants who reported one or more falls during the six-month follow-up were considered as fallers, while in Wrisley and Kumar's study,[18]

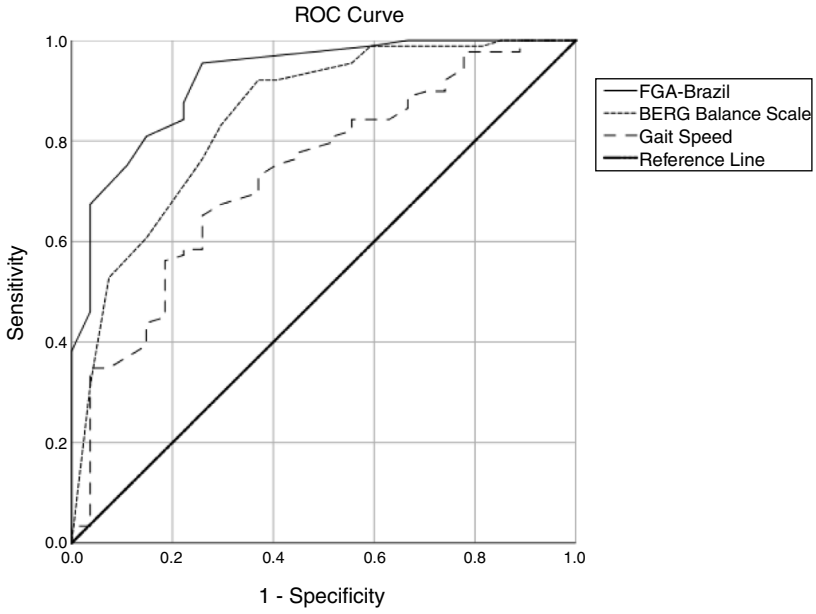

Fig. 1 Receiver Operator Characteristic (ROC) curve of FGA-Brazil, BERG balance scale, and gait speed in predicting future falls in community-dwelling older adults.

fallers were participants who experienced one or more unexplained falls (i.e. not due to medical, environmental, or task-related causes) in the six months following initial tests. Furthermore, in our study, participants were asked about the occurrence of falls only once by telephone six months after baseline assessment, while in their study, all participants were provided with six months' worth of postage-paid fall calendar postcards and were asked to return them monthly.

Ceiling and floor effects occur when a substantial percentage of participants achieves the best/maximum and worst/minimum score, respectively, so that the measurement instrument is unable to capture or discriminate differences at either extreme of the scale.[25] In our study, only 1.7% of older adults achieved a score equal to 30 and no participant (0%) achieved a total score equal to zero. Therefore, the FGA-Brazil did not exhibit a ceiling or floor effect and should continue to be used as a valid measure of postural stability during gait tasks for community-dwelling older adults.

Possible limitations to our methods include the fact that we included only older adults able to ambulate without assistance or walking-devices. Second, participants did not immediately record the occurrence of falls after baseline evaluation but rather we relied on their memory recall of falls at the time of the 6-month follow-up. Another limitation concerns the sample size for predictive validity. Based on COSMIN,[8] our study has a doubtful methodological quality for this measurement because our sample size was less than 30 participants in the smallest group. However, considering a fall prevalence of 34% over a 6-month period,[26] we expected about 41 out of 121 participants to sustain a fall event, which would represent an adequate number of participants. Further research is needed to overcome those limitations and determine the measurement properties of the FGA in other populations in addition to age and sex-referenced normative ranges for performance on the FGA-Brazil in community-dwelling Brazilian older adults. In addition, future studies investigating the responsiveness of the FGA-Brazil are still warranted.

Conclusion

The FGA-Brazil is a two-dimensional instrument valid to evaluate function and risk of falls in community-dwelling Brazilian older adults. It is also a convenient scale to be used in clinical practice taking approximately 10 min to administer. Another advantage of this scale is the absence of ceiling and floor effects. The current data also provided evidence that FGA-Brazil has a cutoff score of $\leq$ 22/30 and is effective in predicting future falls in community-dwelling older adults.

Conflicts of interest

The authors declare no conflicts of interest.

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