

Reliability of the Modified Activities-Specific Balance Scale-Indian Rural Population

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Abstract: Background: The Activities-specific Balance Confidence (ABC) scale is a reliable and valid tool to quantify balance confidence and fall risk among older adults, Parkinson's disease, stroke, brain injury, vestibular disorder and non-specific patient population. Availability of self-administered scale in a native language would make research and the clinical management more effective so this study is aimed to see the correlation and reliability of Modified Activities-Specific Balance Scale-Indian Rural Population. Objective: 1. To quantify the reliability of Modified Activities-Specific Balance Scale-Indian Rural Population. Method: The scale is performed on a person age 60 and an older instruction was given to the participants about study and its benefits and risk in their own language. Consent was taken from participants. Balance will be evaluated with Modified-Activity specific balance scale and values will be noted. Result: The correlation between Activity specific balance confidence scale and Modified Activities-Specific Balance Scale-Indian Rural Population was done using Pearson correlation which shows significant correlation. The reliability of Activity specific balance confidence scale and Modified Activities-Specific Balance Scale-Indian Rural Population was done and it was found to be 0.9. Conclusion: The results Modified Activities-Specific Balance Scale-Indian Rural Population may be a useful tool for to quantify balance confidence and fall risk among older a elderly populations

Keywords: Activity specific balance confidence scale and Modified Activities-Specific Balance Scale-Indian Rural Population

1. Introduction

The Activity specific balance confidence Scale is a scale that measures an individual confidence in performing activities without losing balance. The (ABC) Scale is to be self-administered via a paper copy. If scale is to be self-administered, the instruction should be provided on top or on a cover sheet. ⁽⁷⁾Items are rated on a 0% to 100% whole number rating scale. Scores reflect overall perceived confidence.

The ABC was developed in the year 1995 using the convenient sample of 15 clinicians which included physical and occupational therapists Older Adults Scores < 67% indicate risk for falling; accurately classify people who fall 84% of the times ⁽⁷⁾

Out of the total 16 components of the original scale 8 components were not applicable for the Indian Rural Population. So the modified version has been made.

Aim

To see the Reliability of Modified Activity-Specific Balance Scale-Indian Rural Population

2. Procedure

Recruitment of samples: It can be performed on all healthy individuals.

- After obtaining clearance from the ethical committee from the Dr. Vithalrao Vikkhe Patil Foundation college of physiotherapy, Ahmednagar, instructions was given to the participants about study and its benefits and risk in their own language. Consent was taken from participants. Patient Aged 60 and more, both genders were included in

the study which was conducted in Dr. Vithalrao Vikkhe Patil Memorial Hospital, Ahmednagar. The data will be collected and analysed.

- Balance will be evaluated with Modified-Activity specific balance scale and values will be noted
- The Activity specific balance confidence Scale is a scale that measures an individual confidence in performing activities without losing balance. The ABC was developed in the year 1995 using the convenient sample of 15 clinicians which included physical and occupational therapists
- The Modified Activities-Specific Balance Scale-Indian rural population is modified accordingly to the activities done on the day to day basis by the rural population based in India. The Following questions from Q-8 to 16 are modified based on the activities done by the elderly population in the rural set up. The modified ABS Scale is free and is suitable to use in various settings as it requires minimal specialist equipment or any training.
- This scale has been copyright on 07/07/2021 with Reg. No-L-105199/2021 by DrPallavi Mane under the guidance of Dr. Shyam. D. Ganvir.

Indication:

- 1) Patients with balance impairment
- 2) Patients with vestibular disorder
- 3) To check the risk of fall in elderly population
- 4) Patients with stroke or other neurological conditions.
- 5) Community dwelling elderly population.

Contraindication:

- 1) Lumbar spine precaution
- 2) Patients with spinal cord injury

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3. Result

- Data was collected and analysed using Graphpad Instat version 3.06, 32 bit for windows statistical software.
- The correlation between The Activities-specific Balance Confidence (ABC) and The Modified Activities-Specific Balance scale-Indian Rural Population, was done using Pearson correlation.
- Reliability was calculated SPSS software.
- Table 1 display the gender, age, height, and weight of the groups. Correlation of The Activities-specific Balance Confidence (ABC) and The Modified Activities-Specific Balance scale-Indian Rural Population is shown in fig.1. Positive correlation is seen between both the variables.

Table 1: Demographics of participants

Variables	Mean
Age	68.14286
Height	113.4343
Weight	54.42857

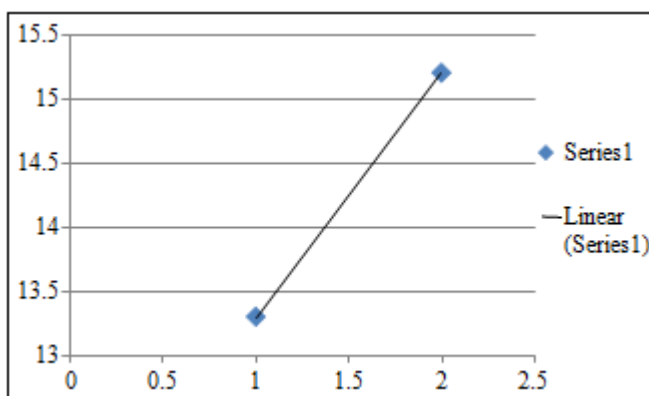
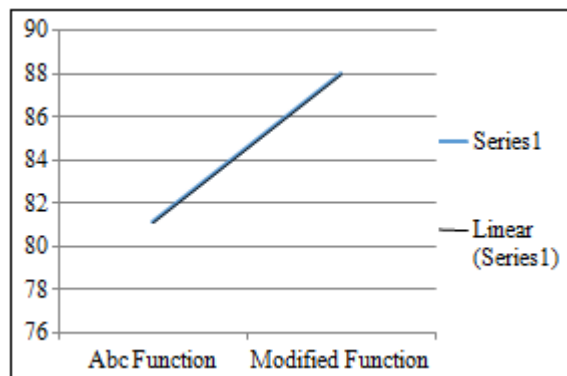


Figure 1: Correlation between The Activities-specific Balance Confidence (ABC) and The Modified Activities-Specific Balance scale-Indian Rural Population.

Reliability was calculated in SPSS software and it is found to be 0.9.

4. Discussion

Test-retest reliability shows significant correlation between this Activity specific balance confidence scale and Modified Activities-Specific Balance Scale-Indian Rural Population ABC-G has good concurrent validity with berg balance scale which is a gold standard in measuring fall risk. We could not correlate this validity with any other modified scale because

in other modified no article was found for this particular scale up to our knowledge.

The present study has some limitations. First, as it is self-reported questionnaire, the participant has a chance to recall questions and may give score accordingly and this can lead to subjective bias. Secondly, Data of this study may not represent the population of the whole. In the future, construct validity for this scale should be considered and it can also be carried out on a larger population with various district populations with various age group.

Our study revealed that people older than 60 years are at an increased risk of falling based on the Balance and risk of fall, which strongly correlated with weak muscle strength of the lower extremities. Our findings are closest to those of Podsiadlo and Richardson and Hughes et al¹⁷ Activity Specific balance Confidence scale and did not include subjects who required an ambulatory device of the present study.

5. Conclusion

Reliability of modified specific balance confidence scale-Indian rural population is 0.9.

Addition of modified version of modified activity specific balance scale according to Indian rural population in this new version can help to screen the balance and risk of fall in Indian elderly population. Based on our results, it seems safe to conclude that people with balance are at a higher risk of falling. The results indicate that Modified Activities-Specific Balance scale-Indian Rural Population may be a useful tool for screening elderly populations.

6. Future Scope

Intervention program should be tailored to balance factors to enhance lower body muscle strength and reduce the fear of falling to prevent repeated incidences of falls in this population.

Conflict of interest-None

Funding Sources-None

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