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USE OF *THE BERG SCALE* TO MEASURE THE RISK OF FALLS IN THE ELDERLY IN PRIMARY HEALTH CARE
Integrative Review

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Abstract: Objective. To identify the use of the Brazilian version of *the Berg-BSE Balance Scale,* as a feasible means to measure the individual risk of falls in the elderly in Primary Care Health. **method.** Revision integrative gives literature, carried out us months in March The June 2021, through the Virtual Health Library, in the *Medical Literature Analyzes and Retrieval System Online (MEDLINE)*, *Latin American and Caribbean Health Sciences (LILACS)* and *PUBMED databases,* bringing together national and international studies on the use of postural balance scales with the elderly in the context of fall prevention. The studies were selected according to the PRISMA protocol. **Results.** Twenty-five texts were selected for the On-screen Review essay: 13 cross-sectional and three longitudinal studies. In addition to these, seven clinical trials, one case-control and a descriptive analysis were registered. Most cross-sectional studies considered that a limitation was the fact that there was not a single instrument capable of evaluating, at the same time, the body balance of the elderly and their muscle strength. The *Berg Scale* was used by several professionals in Primary Care and Secondary Care, and we were interested in its use as a instrument to identify the condition of functional balance in healthy elderly people. **Conclusion**. The *Berg Scale* is a feasible instrument in Primary Health Care, which must be included in the scope of procedures aimed at the care of the elderly, understanding that the instrument will help in the indication of appropriate actions to prevent falls and improve the population's autonomy old woman.
Keywords: Elderly. Primary Health Care. Postural Balance. Balance Scale.

INTRODUCTION

The expectation for the year 2030 is that a person born in Brazil will live, on average, until the age of 79, so that approximately 19% of the population will be elderly (REIS *et al.,* 2016). The speed with which the biological aging of the population takes place imposes a series of concerns on health professionals, due to the natural decline in the autonomy and independence of these people. While autonomy is directly related to mental aptitude, referring to the ability to manage oneself, make decisions and plan one's goals, independence for life implies the full capacity to carry out day-to-day tasks or activities, without having to third-party help (BRASIL, 2018).

In addition to drawing attention to the diseases prevalent in the elderly (SILVA *et al.,* 2021), the World Health Organization (WHO) addresses the intrinsic facts of these disease processes, such as the molecular and cellular damage associated with the gradual loss of physiological reserves and the natural decline of these people's general abilities to defend themselves against external factors, as well as increasing the risks for all types and causes of accidents (SIQUEIRA *et al.,* 2011).

Falling is the most frequent accident in the elderly, so it represents the second leading cause of death worldwide, due to unintentional or accidental injuries. Annually, nearly 646,000 people worldwide die from falls. Adults over the age of 60, however, suffer a greater number of fatal falls. In addition, 37.3 million falls suffered by the elderly are serious and require medical attention (WHO, 2018).

With advancing age, the postural control systems are gradually suppressed, decreasing the compensatory capacity and leading to an increase in the instability of the body. balance (W.H., 2015). This condition it is identifiable early in health services, in particular in Primary Health Care (PHC). Multiprofessional teamwork – in basic health units, as well as in monitoring families in a

specific area, with comprehensive care for the population in general – overlaps with the challenge of implementing preventive actions, also seeking to reduce the worst outcome related to postural imbalance: mortality from falls (MENDES, 2011).

In turn, in Brazil, the National Health Policy for the Elderly (PNSPI) expresses this concern, since the elderly make up a group of greater vulnerability, suggesting the incorporation, already in Primary Care, and in the context of a multidimensional approach, instruments and techniques of psychosocial amplitude and functionality testing, detecting in a timely manner the risks to which they are exposed (ROEDL *et al.,* 2016).

In the path of this practice, number is found considerable in instruments available for to evaluate functionality and get diagnoses associated with risk factors predictive of falls (BRASIL, 2018). Among all the most used instruments, there are those for gait and balance assessment, guided by POMA performance; O *activities-specific balance confidence-ABC; physical performance test-PPT* and O *Test in Functional Range-TAF,* among others (MARQUES *et al.,* 2016).

Due to the variety of functional balance assessment instruments, it is important to consider some choice criteria when applying them to large portions of the population. In fact, priority is given to low cost, time spent and ease, as well as safety for application to patients.

Respecting all these selection criteria, *the Berg-BSE Balance Scale is* widely used in clinical practice. Compared to the others that are applied, this is the scale that has more reliability and greater validity, when used in scientific research, according to the various proposals, such as the quantitative description of the ability of functional balance, monitoring of progress From patients and evaluation gives effectiveness of interventions at clinic practice _ (DAYS *et al.,* 2009).

Developed in 1992 by Katherine Berg, it was translated and culturally adapted to assess the functional balance of the Brazilian elderly population, having good reliability of properties psychometric (BERG *et al.,* 2021). About of that version Brazilian of the *BSE,* there are records (current and remote) of its wide use in people over 60 years of age (MIYAMOTO *et al.,* 2004), showing trends in approaching this topic through investigations carried out in the most general spaces and in the different conditions of the seniors.

The *Berg Scale* was applied by Franchignoni, in 2005, during research with 57 elderly patients with Parkinson's disease (PD) and, in mid-2012, its internal validity, *hic est,* the reliability of *the Berg Scale* in people with different neurological pathologies – and irrespective of the etiology of the disease –, as an instrument for measuring the impairment of balance in the elderly (FRANCHIGNONI *et al.,* 2005), (BERG *et al.,* 2021).

According to what Geib (2012) informs, measurement, followed by strength training in the lower limbs for the elderly is beneficially significant as an activity capable of improving balance and preventing/reducing the risk of falls, favoring the improvement of the health of the elderly. in your everyday environment. The aforementioned investigation is an important strand of knowledge that relates the elderly in their daily lives, their lifestyle, body balance and falls. Publications related to balance in the elderly in the community, however, are still scarce in the scientific environment, so that the product of this Integrative Review on screen stimulates discussions to bring benefits, reflections for the health of the elderly in general, with origin in the specific professional views/interventions.

Studies with this focus also bring potential indications for the incorporation of *the Berg*

Balance Scale in clinical protocols in the health care of the elderly, providing instruments for the performance of health professionals, in addition to supporting the formulation of public policies with a view to monitoring gives functionality and the preservation of autonomy and independence of the elderly population.

Research on the functional balance associated with the risk of falls in the elderly is considered relevant, since that variable is often reduced in this age group. The innovation of the study is linked to the expected advantages, which include benefits for an objective and clear assessment of the physical fragility of geronts in Primary Health Care, whose service time for the oldest-old tends to be reduced. The instrument used in the assessment of functional balance, in this case, the *Berg Scale,* requires only a reserved place with a chair, a stopwatch, a ruler and a stepladder.

Thus, the objective of the investigation now under report was to analyze the use of the Brazilian version of *the Berg-BSE Balance Scale* as an instrument to measure the individual risk of falls in the elderly, having application in Primary Health Care, aiming to prevent, protect and promote the health of the elderly.

METHOD

This conforms to a article in revision integrative (RI), so that, in order to prepare the study, were followed the fundamental steps: identification of the theme and selection of the research question; the inclusion and exclusion criteria of the studies; categorization of studies; evaluation of studies; interpretation of results and synthesis of knowledge (MENDES *et al.,* 2008).

To conduct the line of investigation, the following guiding question was elaborated: - What are the approach trends – in terms of frequency of use, cases and accumulated advantages – to prioritize *BSE* in studies that assess the risk of falls in the elderly? The purpose of this experiment is to determine the feasibility of the scale to be used in health practice by Primary Care teams in the contexts of prevention, protection and health promotion of the elderly, based on the suggested question. It tends to guide the demand for elements among the selected studies that may indicate (or fail to do so) the inclusion of this instrument in the routine of health professionals in this care modality.

In these terms, the search for articles that address the investigated topic followed the PVO strategy (Population, Variable of interest and *Outcome* /outcome), defining the study population as the "elderly", the variable of interest "postural balance" and the outcome the use (expressly or tacitly) of *BSE* in contexts of "Primary Health Care".

Surveys were carried out from March to June 2021, in electronic media, with a greater range of scientific production in the field of health, giving priority to the *Latin American and Caribbean Literature on Health Sciences-LILACS databases, and the Medical Literature analysis and Retrieval System Online-MEDLINE* – in *Medline, the PubMed* search engine was applied in an isolated phase, which undertook greater quality in the free search and access to the titles of this substrate of articles in Biomedicine; and the controlled vocabulary of *MeSH biomedical terms* (*Medical Subject Headings*) of indexing, in the search keywords. In the bases, in addition to the exclusive filters for each platform, a combination with the following *MeSH descriptors was used* **:** "elderly", "aged", "f rail elderly", "health", "primary health".

We also resorted to the strategy of conjugating words using Boolean operators, using mainly "OR", but also using "AND" and, more rarely, "NOT". Considering the characteristics of the contemplated databases. These operators, when typed directly into the

search area, expanded the possibilities of valid matches.

As criteria for inclusion of titles for IR, the following were established: studies whose theme was related to balance postural in seniors evaluated as healthy; those articles available for *download* in full; essays edited in one of the three main languages considered, that is, English, Spanish or Portuguese; publications made from 2016 to 2021. This time interval was delimited, because the researcher - the first author indicated after the title of this essay - needed to enter the field, with her thesis on the application of *the Berg Scale* to assess the functional balance of the elderly in the community.

Studies in the format were excluded. of theses, dissertations and documentaries, as well as the titles that referred to reviews, abstracts in events scientific, reviews systematic gives literature, you what were not carried out with the population exclusively of elderly people, and, finally, studies whose sample informed referred to elderly with some lesion, trauma or fractures in femur, seniors fragile or limping, patients with cerebrovascular accident, patients with Parkinson's, Alzheimer's, cancer, among other morbidities that brought into the review variables that could cause embarrassment to the demand made.

Following the stage of applying the filters, in view of the great return of securities captured in each support of indicators, these data were migrated to the *software Rayyan - QCR,* a free *web application.* The articles were initially evaluated by titles and abstracts to identify inclusion criteria.

With the help of *Rayyan,* duplicate titles were immediately identified and excluded by the aforementioned tool. THE reading From titles captured and, in Many cases, The decoding From summaries, adding up to the variables offered by *Rayyan,* configured the first fluid step of including or excluding titles. In the course of the other stages of the IR, as required by the use of *Rayyan,* a blind review was carried out (by the first researcher indicated and one more collaborator) independently. In case of disagreement, a review operator *tertius* would be requested to verify the eligibility status.

Figure 1 contains the summary of screening and inclusion of articles, from the point of view of the *Rayyan tool.* It shows that, initially, 4.3% of the decisions taken blindly by the evaluators came into conflict; and more than 24.3% of the titles left the evaluators in doubt as to whether to include it or not. After resolving the conflicts, in order to dismiss the third referee, and also with consensus regarding the 97 (15.4%) *maybe articles,* 25 articles remained, that is, close to 4% of the total (630 texts).

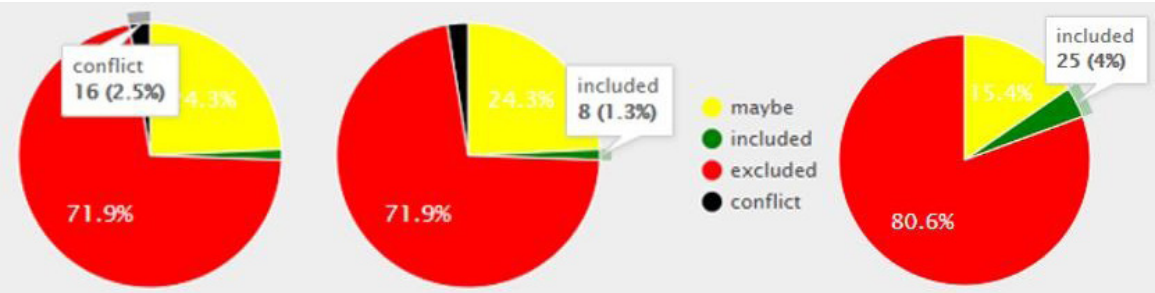

Figure 1: Summary of *Rayyan screening* and definitive inclusion of titles.

SOURCE: *My Reviews* : The use of *the Berg Balance Scale* in Primary Health Care to measure the risk of falls in the elderly: what the studies say, final summary of the 2021 screening. https://rayyan.ai/reviews.

Then, based on each selected article, a complete analysis was carried out.

In addition, the variables analyzed to extract data from the studies were author, year, place of study, instrument used and work objectives. After reading the articles in full, the writings were divided into subgroups, with a view to examining the most effective scales in Primary Health Care, with regard to the prevention of falls in the elderly.

In the methodological quality assessment stage, having identified the twenty-five (25) titles that would finally enter the IR, they were stratified, according to the evidence pyramid (SOARES *et al.,* 2014) : seven (07) studies that were in the first level, being, therefore, clinical trials; another three (03) in the second, in the case of a cohort study; one (01) study at the second level, which is of the case-control type; thirteen (13) at level three, characterized as cross-sectional studies; and one (01) at the last level of scientific evidence, portraying the study descriptive.

At the time of data collection and selection of articles, the methodological phases proposed by the PRISMA protocol were continued, as shown in figure 2. The flowchart demonstrates the quantitative and qualitative criteria for excluding the reports generated by the search operator. In addition to providing visibility, the flowchart, below, also leads to transparency in the scope of the review stages, fulfilling the purpose of highlighting the researcher's commitment and responsibility with rigor in IR, as proposed by Galvão, Pansani and Harrad (2015).

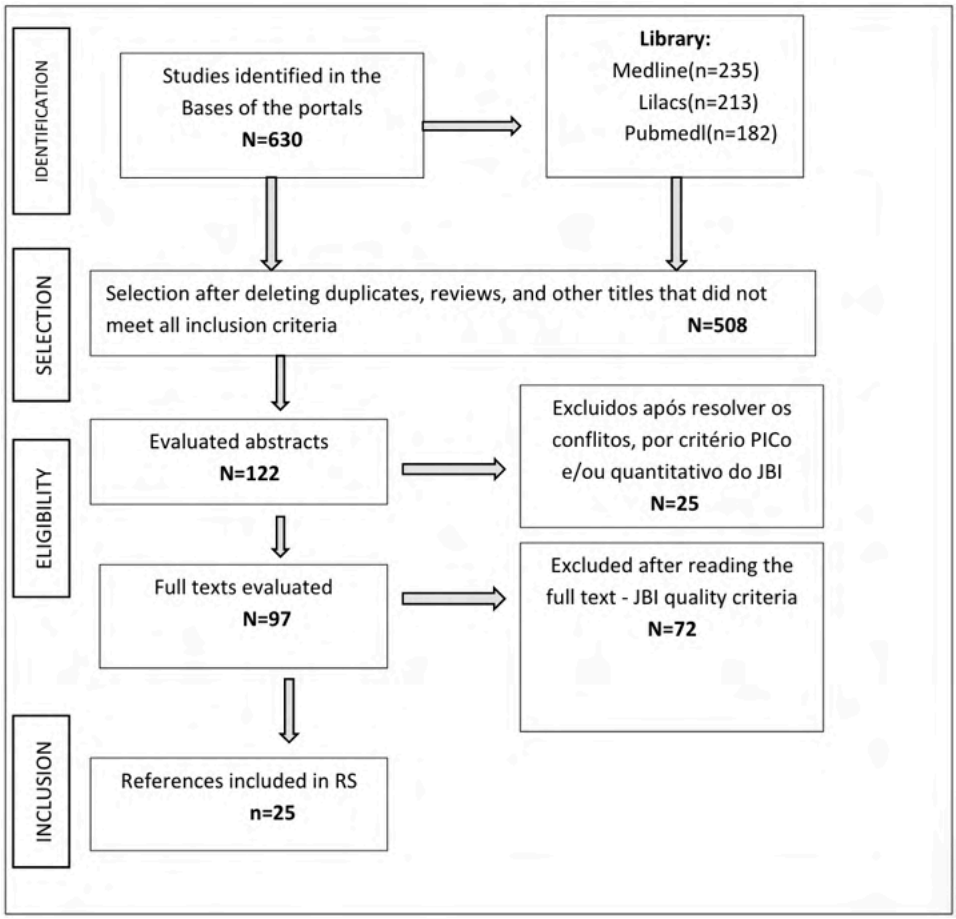

Figure 2 - PRISMA flowchart of identification, analysis and selection of articles included in the SR.

Source – Adapted from Galvão, Pansani and Harrad (2015).

The flowchart makes the following process evident: as verified during the description of the method, the database search resulted in 630 (six hundred and thirty) references forwarded to the interior of *Rayyan,* with the following occurrences: 235 (two hundred and thirty-five) from *Medline,* 213 (two hundred and thirteen) from *Lilacs* and another 182 (one hundred and eighty-two) titles captured using *PubMed.* A total of 508 (five hundred and eight) titles were excluded from the beginning, according to all the review criteria adopted, leaving 122 (one hundred and twenty-two) evaluated based on the abstracts, which resulted in the elimination of 25 (twenty-five) texts. inconsistent with the *PICo* criterion. And, by the *JBI* quality criterion, another 72 (seventy-two) complete studies analyzed were excluded. Finally, 25 (twenty-five) references were included in the Integrative Review – IR.

RESULTS

Among the selected works, national and international research was analyzed, where the predominance of publications that relate to the matter was found, being published in 2019 (eight results of empirical demands were published that year), inside and outside the Brazilian Territory[20, 21, 22, 23, 27]. Therefore, there is also an evident global interest in the subject - which is seen here on the part of countries/states in Europe (Italy, United Kingdom, Denmark)[25, 26, 27] and Asia (Thailand and Taiwan)[28, 35], as shown in the table.

Of the 25 (twenty-five) articles selected, 13 (thirteen) are cross-sectional studies and only three are longitudinal, both of which are cohort groups. In addition, seven clinical trials, one case-control and a descriptive analysis are recorded. Most cross-sectional studies revealed as a limitation the fact that there is not a single instrument capable of evaluating the elderly's body balance and muscle strength at the same time. As for the year of publications, the time interval found was from 2016 to 2020, with four articles from 2016, six from 2017, four from 2018, eight from 2019 and three from 2020.

In the Table are all the selected researches, with a view to investigating the trends demarcated in the publications. The variables authorship, year/place of publication, type of study, sample, instrument used and objectives stand out, submitting them to interpretations.

authors	year and place	Type of study and sample	instrument used	Goals
Nascimento *et al.* [18]	2017, Brazil.	cross, 41 elderly.	*Berg-BSE Balance Scale; Dynamic Gait Index -DGI; Time Up and Go Test-TUG; Time Up and Go Cognitive -TUGC; Body Balance Test – TEC.*	To analyze a correlation between instruments used to assess body balance and predict the risk of falls in active elderly people.
Santos *et al.* [19]	2016, Brazil.	prospective cohort, 24 elderly.	*Berg-BSE Balance Scale; Cerny protocol - gait analysis.*	To examine the parameters of gait and body balance of the elderly, after two exercise programs, one for motor coordination and balance and the other for aerobic exercises.
Pink *et al.* [20]	2019, Brazil.	cross, 96 elderly.	*Berg-BSE Balance Scale; Functional Range Test-TAF; Time Up and Go Test-TUG.*	Evaluate the elderly using *the Functional Reach Test (PA)* and verify the factors associated with their performance.

franciulli *et al.* [21]	2019, Brazil.	cross, 76 elderly.	*- BSE Balance Scale; Time Up and Go Test-TUG.*	To measure the effect of physical activity on the number and risk of falls, through postural balance, mobility and muscle strength in the elderly.
Araújo *et al.* [22]	2019, Brazil.	Descriptive Analysis, 78 elderly.	*Berg-BSE Balance Scale.*	To analyze the balance and risk of falls of riverside and urban elderly people in the Amazon context.
Paiva *et al.* [23]	2019, Brazil.	case-control, 90 elderly.	*Berg-BSE Balance Scale.*	To evaluate the practice of ballroom dancing in the prevention of falls in the elderly.
Daughter *et al.* [24]	2018, Brazil.	cross.	*Berg-BSE Balance Scale; Time Up and Go Test-TUG; Performance-Oriented Gait and Balance Assessment-POMA; Tinetti Equilibrium Index; Dynamic Gait Index -DGI.*	Develop an electronic *web mobile tool* that assists health professionals in assessing the risk of falls in the elderly with support in instruments adapted to Brazilian Portuguese, validated for the elderly population and widely used in the literature.
Witham *et al.* [25]	2019, UK.	randomized clinical trial, 95 elderly.	*- BSE Balance Scale; Time Up and Go Test-TUG.*	Vitamin K is believed to be involved in bone health and maintenance of neuromuscular function.
Hofgaard *et al.* [26]	2019, Denmark.	randomized clinical trial, 27 elderly.	Berg-BSE Scale; Time Up and Go Test-TUG; Fullerton Advanced -TFA Test.	To investigate the influence of a chain dance from the Faroe Islands on the profile of health, mobility and postural balance in the elderly.
Silva *et al.* [27]	2019, Brazil.	prospective cohort, 90 elderly.	*- BSE Balance Scale; Time Up and Go Test-TUG.*	To study the effects of aquatic exercise on mental health, functional autonomy and oxidative stress parameters in depressed elderly.
Penn *et al.* [28]	2019, Taiwan.	Prospective cohort, 50 elderly.	*- BSE Balance Scale; Time Up and Go Test-TUG.*	Investigate whether a simplified and personalized Tai-Chi program is beneficial for practitioners.
Martinez *et al.* [29]	2018, Brazil.	cross, 22 elderly.	*- BSE Balance Scale; Time Up and Go Test-TUG.*	To compare body balance, mobility and respiratory muscle strength of elderly women practicing the *Pilates Method* and active elderly women.
Souza *et al.* [30]	2018, Brazil.	Randomized clinical trial, 15 elderly.	*Berg-BSE Balance Scale.*	To compare the influence of two exercise protocols on balance in elderly women.
Farias *et al.* [31]	2017, Brazil.	cross, 56 elderly.	*Berg-BSE Balance Scale; Time Up and Go Test-TUG; Functional Range Test-TAF.*	To evaluate balance, functional mobility and quality of life in elderly participants and non-participants of a community center.
gozzi *et al.* [32]	2016, Brazil.	cross, 600 seniors.	*I*	To evaluate the balance, agility and cognitive ability of elderly practitioners of physical exercises in gyms for the elderly.
Pereira *et al.* [33]	2017, Brazil.	cross, 21 elderly.	*Berg-BSE Balance Scale; Tinetti Balance and Gait Scale; Katz's Daily Living Activity.*	To evaluate the effects of a functional training protocol on the balance and functionality of non-institutionalized elderly people.

Ferreira *et al.* [34]	2017, Brazil.	Randomized clinical trial, 32 elderly.	*- BSE Balance Scale; Time Up and Go Test-TUG.*	To verify the effect of a multisensory and closed kinetic chain exercise program on functional capacity and balance in elderly women.
sadjapong *et al.* [35]	2020, thailand	Randomized clinical trial, 64 seniors	*- BSE Balance Scale; Time Up and Go Test-TUG.*	To investigate the effectiveness of a multicomponent exercise program (MCEP) on frailty and physical performance.
Nakagawa *et al.* [36]	2017, Brazil.	cross, 202 elderly	*Berg-BSE Balance Scale; Barthel 's Index.*	To compare the balance and functional independence of the elderly, according to sex and age, and to evaluate the association between postural balance and the number of medications in use.
Bianchi *et al.* [37]	2020, Brazil.	cross, 245 seniors.	*Berg-BSE Balance Scale.*	To compare body posture and balance between elderly practitioners and non-practitioners of physical exercises.
Cabral *et al.* [38]	2020, Brazil.	cross, 124 elderly	*Berg-BSE Balance Scale.*	To assess whether" posturography " is considered a predictor of recurrent falls in the elderly.
Valduga *et al.* [39]	2016, Brazil.	cross, 53 elderly	*Berg-BSE Balance Scale; Time Up and Go Test-TUG; Functional Range Test-TAF; Lateral Range Test-TAL.*	To analyze the relationship of measures related to the risk of falls, functional capacity, muscle strength and fear of falling in elderly women who fall and do not fall recurrently.
Vieira *et al.* [40]	2017, Brazil.	cross, 98 seniors.	*- BSE Balance Scale; Time Up and Go Test-TUG.*	To evaluate the reliability of the modified TUG in detecting the decline in physical mobility with advancing age in non-institutionalized middle-aged and elderly women and its correlation with functional exercise capacity (FEC).
pattia *et al.* [41]	2016, Italy	Randomized clinical trial, 92 elderly.	*Berg-BSE Balance Scale;*	To assess pain perception and balance skills in a group of elderly people.
barbosa *et al.* [42]	2018, Brazil.	Randomized clinical trial, 100 elderly.	*- BSE Balance Scale; Time Up and Go Test-TUG.*	To evaluate the effect of smooth and textured insoles on the balance of elderly people in Primary Care.

Table - Articles selected according to authors, year and place, type of study, sample, instrument used and objectives.

Source: own elaboration (2021).

The *Berg Scale* classified the condition of functional balance as safe for the groups that practice physical activity and do not practice physical activity [18,19,21,28,31,32]. Furthermore, the calculated relative risk was 0.2, demonstrating that the practice of ballroom dancing is expressed as a protection factor for the *Berg Scale* lower than 45 [23].

Elderly people in a riverside community, however, have better balance when compared to urban elderly, with a highly significant difference (p=0.000) [22]. The *Berg Scale* (po 0.01) showed significant independent predictive power [38]. This instrument denotes sensitivity in detecting a good level of balance, being valid and reliable. In addition, it represents an economical way to measure different levels of balance, when investigating large groups of people [41].

In this Integrative Review, it was found that the application of *the Berg Scale* was varied, however, there was a predominance of execution in the community [18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42], coexistence center [18, 19, 31, 34], school clinic of Physical Therapy in the community [20, 24, 29, 30, 33], Primary Health Care.

Its use by professionals from different areas of health care remains, as well: medical professionals and nurses from the Warning primary [20, 23, 32, 42], workers gives Warning secondary school, with a predominance of physical therapists [29,30, 32], in addition to and health specialists (19.21, 22, 24, 26, 27.28, 31, 33, 34, 35, 36, 37, 38,39,40,41).

DISCUSSION

With regard to interventions that help prevent the risk of falls, it was found that the *BSE* helped to make decisions in the sense of innovative interventions, which aim to prevent the risk of falls in the elderly, mentioning: physical activity, dance, Faroe Islands chain dance, aquatic exercise, simplified and personalized Tai-Chi program, Pilates method, physical exercises and exercise program [22, 24, 27, 28, 29, 30, 31, 33, 35, 36].

At the context gives Primary Care _ in Health-APS, The *Scale in Berg* at Brazilian version, when applied to the elderly population, is a self-reported instrument of the patient's history, and its use is based on the sensitivity of clinical practice to analyze variations in the functional balance of the elderly, the scale is easy to apply and interpret [42].

The National Health Policy for the Elderly (PNSPI) refers to integral and Integrated Care with singular relevance [43]. As for the use of instruments to assess capacity, as it provides, in addition to quantitative descriptions of balance, the satisfaction of several other requirements, namely: reliability inter and intraobserver, possibility in monitoring of progress of patient and in evaluation gives efficiency of interventions performed [10], in addition in be correlated with the *Tinetti and Timed Tests up and Go balance and mobility* [9].

The systematic review brought to light the idea that, due to the complexity of the human being and its multiple systems in correlation, hardly, just an instrument manages to cover all the quantitative and qualitative dimensions involved in the phenomenon of falling, all of them having both particularities and limitations [44]. Nevertheless, the *Berg Balance Scale,* in Primary Care and in the community, is evaluated positively, both by the professionals in health, executors gives application gives Scale, and by the elderly in the analyzed studies. The importance of *the Berg Scale* in assessing seniors what performed The practice gives activity physical, as advantage in promotion gives health with a view to aging healthy.

The findings evidence the value of the instruments and, in particular, the *Berg Balance Scale* as a reliable instrument to

be used during balance assessments in the elderly aged over 60 years [44]. The *Berg Balance Scale, in aliis verbis,* guides the health professional in Primary Care to specifically assess postural balance. As an example of a study in this direction, what has been done to demonstrate the fact that the foot plays a valuable role in postural sway is mentioned. The interventional study concludes that the elderly using corrective insoles in shoes [42] improves their general balance. This is also an example of the application of *the Berg Scale,* used with low cost and high availability for the elderly in the community.

In addition, there are several real clinical conditions in which *BSE* demonstrates high reliability, considering different times of the day, places and also conditions of noise and distraction of the elderly. Furthermore, its efficiency was validated in relation to the evaluation of geronts balance, employing various auxiliary mechanisms of locomotion. The only instrument that matches the *BSE* in terms of sensitivity to changes in equilibrium states is the *Functional Range Test,* which also makes up the *Scale de Berg* [9, 46].

In relationship to environment where the *Scale in Berg* he was applied with O public old man, there was predominance at community. when being used with seniors gives amazon riverside [22], they expressed better control of postural balance in a *BBS functional test.* This fact leads one to think that the riverine way of life favors active old age and a balanced best.

With regard to interventions that help prevent the risk of falls, ballroom dancing [23] and physical exercises [21, 26, 27, 28, 29, 32, 34, 35] took place. Dance practitioners showed greater balance and, consequently, smaller risk in falls. Meanwhile, the dance he was a potentiating factor of the physical resistance of the elderly, preventing falls (a condition that accompanies the gradual tendency of low functionality in aging). In addition, the *BSE* evaluated the elderly who practiced physical exercises, who expressed better posture and more balance, compared to those who did not. practitioners.

OTHER RELEVANT DISCUSSIONS

It is widely known that strengthening exercises have positive implications for an active lifestyle, favoring a better functional capacity of the elderly, as at any stage of life. However, it is questioned: - *under the prism of the risk of falls in the elderly and damage prevention, it is a good idea to incorporate the BSE as part of the clinical care investigation of the elderly in PHC, according to the characteristics of this care modality* (easy access, first contact of the person with health services, basic technological resources, longitudinal follow-up, multidisciplinary care and community action)?

What was found in the studies studied was that this Scale is used in cases of comparisons between groups - one of them being the control group, usually. Relying on its few possible results to (pre)conceive functionality as arising from the capabilities developed in the individual (when there is a favorable environment, free of risks, in which it was changed for the elderly to perform the task free from the risk of falling). Thus, the authors use the data obtained to support their theses and conclude by the maxim that the elderly assisted in Primary Care, as long as they undergo interventions to recover/preserve postural balance, tend to demonstrate better functional capacity, when compared with those who are sedentary. of the community in general.

Now, the experimental environments are always *locus* controlled, in such a way that the improvements obtained in the balance of active elderly people are measurable by the *BSE* (considering the grouping of tasks on the scale), but this is not likely to be the rule in real life, that is, the same results are likely not

to be repeated in a different condition from the one created by the scientific experiment, or even one cannot expect that the conditions found in a given time/context remain the same, day after day.

This creates the opportunity to think about the possibility of training the elderly for self-application of BSE, along the lines of what they already do with the measurement of their own blood pressure and blood glucose, for example. Perhaps this would lend more quality to the data, in the act of "scoring" functionality, since such data will pass through, or will be products of, individualities that, as the idea itself suggests, are endowed with subjectivities.

It is tempting to reflect on the idea that, when there is the possibility of using little technology, as in the case of *BSE,* without many intervening variables (devices that need constant maintenance, patient displacement, sophistication of methods, etc.), it is already of great importance. utility, if not enough, the evaluative/predictive power to measure possible decline in body balance among the elderly [36, 38, 40] – inferring, based on these primary findings, something about the power/duty to act early in the case of the elderly, avoiding the need for interventions at more specialized and expensive levels of care [46].

An important warning is made here: with regard to professionals not falling prey to a simplification of basic health care in the context of the SUS, that is, there is a need not to adhere to a disastrous historical discourse that the "SUS it is done with little" and with "poor work tools", dispensing with the technological density available to them in these services provided by the health system[47, 48]. Due to a certain elitist exclusivism, the discourse of "poor SUS, for the poor" is teratogenic, reproducing a system that is intended to exclude a large portion of the population (from the country's wealth), since the SUS is hostage to the meager resources.

In the context of the studies, the *BSE is still discussed* as a functional balance test, and all the articles read take care to describe the *Scale* in its characteristics and in the particularity of having a Brazilian version of this instrument. The argument is defended that, through the *BSE,* the functional capacity of the elderly is measured, related to posture and balance.

However, it is because the researchers devote little attention, limiting themselves in their articles, often to a single paragraph with general descriptions of the *Scale* – and also thinking here of all the human variables involved in the assessment of balance and functionality –, which leads to questioning how much the choice for the use of *BSE* in the assessment of static and dynamic balance (or mobility and strength tests) stems more from its practicality and cost, than even from its possible accuracy and sufficiency, (which was a fundamental point on which this review sheds light).

As state-of-the-art, the use of this type of questioning as a source of research/reference/information or for future reflections is not invalidated – much less must similar scientific essays be discouraged with a view to permanent updates of this type of debate and application of possible tools in Primary Health.

It is common sense, however, to be cautious with strong statements, taking a better path to articles in which the value and importance of additional studies are highlighted, in addition to the association, during the use of BSE, with the self-report of the elderly and other modalities. of more global or complementary assessments. It is even defended the use of more qualitative measures, aimed at refuting the imperative of graphic or numerical scales.

CONCLUSION

The *Berg Balance Scale* expresses sensitivity in detecting a good level of balance, being a valid and reliable instrument. In addition, the elderly who practice physical exercises exhibited better posture and more balance, compared to those who did not. practitioners.

It was also evidenced that the *Berg Scale* is recurrently used by health professionals in Primary Care as a preventive measure for falls in the elderly.

The *Berg Scale* can be included in the assistance protocols of the Primary Health Care Network, with the scope of evaluating and monitoring balance in the course of aging, helping health professionals and managers to develop strategies to prevent falls and improve the elderly autonomy.

In view of its ease of use and low cost, *BSE* is one of the favorites in balance tests or assessments of healthy elderly people, having been found to be used by professionals from different areas of health and in environments ranging from the community, through the center. of coexistence, clinics, physiotherapy clinics, in the community, in the Primary Health Care services.

This study has limitations that need to be highlighted: a) correlating body balance (only) with gait speed; b) the relationship between balance and muscle weakness, decreased touch and sedentary lifestyle in the elderly are ignored. Regarding the strengths, the following stand out: a) three databases were used; b) the study had two independent evaluators; c) use of a tool to assess the methodological quality of the articles.

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