REVIEW ARTICLE

Dance-based interventions on balance and falls in the elderly in order to health promotion: a literature review

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ABSTRACT

A balance disorder is one of the most common disorders in older people that leads to falls and endangers the health of the elderly. Falls can result in both physical injuries and psychological problems. Many economic burdens are also imposed on individuals, their families, and the community. One way to increase balance, decrease falls, and thereby enhance the health of the elderly is through dance-based therapies. This study aims to review articles using different dance-based interventions such as yoga, Pilates, tai chi and aerobics on balance improvement and fall prevention in elderly individuals. This narrative review was performed using narrative synthesis. An extensive literature search was performed in databases of Science Direct, Google Scholar, PubMed, and ISI Web of Knowledge using OR, AND, and NOT operators and the selected keywords. Only studies written in English and published in journals between 2010 and May 2022 were used for this purpose. The articles chosen in this study were those that have studied the effect of dance-based interventions on balance and fall prevention in the elderly. Studies that involved other disabilities that upset the balance and caused falls and that examined the effect of other interventions on balance and falls in these people were also excluded from the study. Finally, 22 articles were selected from the final evaluation. Yoga, Tai Chi, Aerobics, and Pilates were among the dance-based interventions examined in these trials. The results of this study demonstrated that all dance-based interventions could enhance balance and hence decrease falls in the elderly. Older people may also benefit more from longer training sessions and more intense activity. We can conclude that these interventions can help older adults improve their balance and decrease their risk of falling. Consequently, they might be viewed as promoting this population's health.

Key words:
fall; fall prevention; balance; dance-based intervention; dance therapy

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INTRODUCTION

According to the World Health Organization(WHO) definition, people over the age of 65 are considered elderly.[1]The elderly population is growing faster than other age groups, and both high-income and low-income countries are facing this problem.[2, 3] It is reported that the number of elderly people in the world will reach 2 billion by 2050.[4] Therefore, attempting to promote the health of the elderly is incredibly necessary. The aging phenomenon causes changes in the body's systems, leading to disorders in the elderly. One of the changes associated with aging is to reduction in the functions of proprioception receptors, and visual and vestibular systems, which decreases the necessary information about posture and balance being transmitted to the central nervous system. Age-related balance problems and falls eventually affect senior people.[5] Imbalance is one of the biggest causes of falls in the elderly. A fall is a sudden, involuntary change in position that causes a person to land on a lower level (object, the floor, or the ground).[6] It is reported that nearly 30–40% of adults over 65 in the United States fall at least once a year.[7] Moreover, globally, one-third of community-dwelling older people experience falls each year.[8] Falls can lead to psychological problems such as decreased self-esteem and independence, increased physical injury, functional decline, and death.[9] A lot of economic burdens also are imposed on individuals, their families, and the community.[10-13] The overall direct medical expenses for fall-related injuries in older people in the United States in 2008 were US$23.3 billion, and the fall-related expenditures in the United Kingdom were estimated to be US$1.6 billion. By 2020, these costs were $55 billion worldwide.[7] Therefore, primary prevention of falls can be very crucial. One of the ways to reduce falls in the elderly is to find an effective intervention to enhance balance. There are different interventions to improve balance and reduce the number of falls in the elderly such as conventional exercise that has not been readily adopted by older people because of obstructions that include fear of falling, health problems, and motivation to exercise.[14] An alternate option to traditional exercise is dance-based therapy. Dance engages older people, promoting adherence and enhancing motivation. Dance is an agreeable social activity for various older people and, physically, it promotes movement of the head and trunk and also, the center of gravity is moved in every direction from the pivot point of support, and this impacts components that contribute to balance.[15] It has been demonstrated that different types of dance could help the risk of falls in the elderly.[16] To Our knowledge, dance-based interventions have been less discussed. More comprehensive information about dance-based interventions for fall prevention may lead to choosing more effective treatment. The purpose of this study is to review articles that have used dance-based interventions on balance improvement and fall prevention in older people.

MATERIALS AND METHODS

Search Strategy

This study is a narrative review conducted using narrative synthesis. The search strategy was based on Population Intervention Comparison Outcome (PICO) (Table1), which included all studies written in English published from 2010 to May 2022. The search was performed using “OR”, “AND”, and “NOT” on the selected keywords (i.e., elderly, aged, old, senior, geriatric, aging, fall prevention, fall, balance, dance-based intervention, yoga, pilates, tai chi and aerobic) in PubMed, Science Direct, Scopus, and ISI web of knowledge databases. After completing all database searches, the citations were compiled and entered into the Endnote 20

bibliography manager, where duplicate citations were removed. Our search strategy consisted of analyzing the keywords in the articles' titles, checking the abstracts, and then reviewing the full text of the articles performed by two reviewers. Two reviewers independently read the titles and screened the abstracts of potentially relevant studies. They removed irrelevant studies and obtained the full paper if the abstract did not provide sufficient data to determine eligibility for inclusion in the review. According to inclusion criteria (i.e., participants (the elderly people), intervention type (dance-based intervention, yoga, pilates, tai chi, aerobic), and final results and outcome), two reviewers independently categorized these studies as "relevant", "irrelevant", or "possibly relevant". In the case of disagreements, they were resolved by referring to a third review author. The procedure was followed using the preferred reporting items for systematic reviews and meta-analysis methods (PRISMA) (Fig. 1). Finally, 22 articles were selected from the final evaluation. In this study, the articles were reviewed based on the sample population characteristics, study design, and the impact of the different dance-based interventions on balance improvement and fall prevention in the elderly.

Eligibility criteria

This review included articles that reported studies to evaluate dance-based interventions to prevent falls in the elderly. Studies that involved other disabilities such as neuropathy and neurological disorders, vestibular and vision problems, or any other cause or disease that upsets the balance and causes falls were excluded. Papers that examined the effect of dance-based interventions on other symptoms of old people and papers that examined the effect of other interventions on balance and falls in these people were also excluded from the study.

Table 1. Selected keywords using the PICO method

P: Population	I: Intervention	C:Comparision	O:Outcome
Elderly	Dance-Based intervention	-	Fall Prevention
Aged	Yoga		Fall
Old	Pilates		Balance
Senior	Tai Chi		
Geriatric	Aerobic		
Aging			

PICO: population intervention comparison outcome

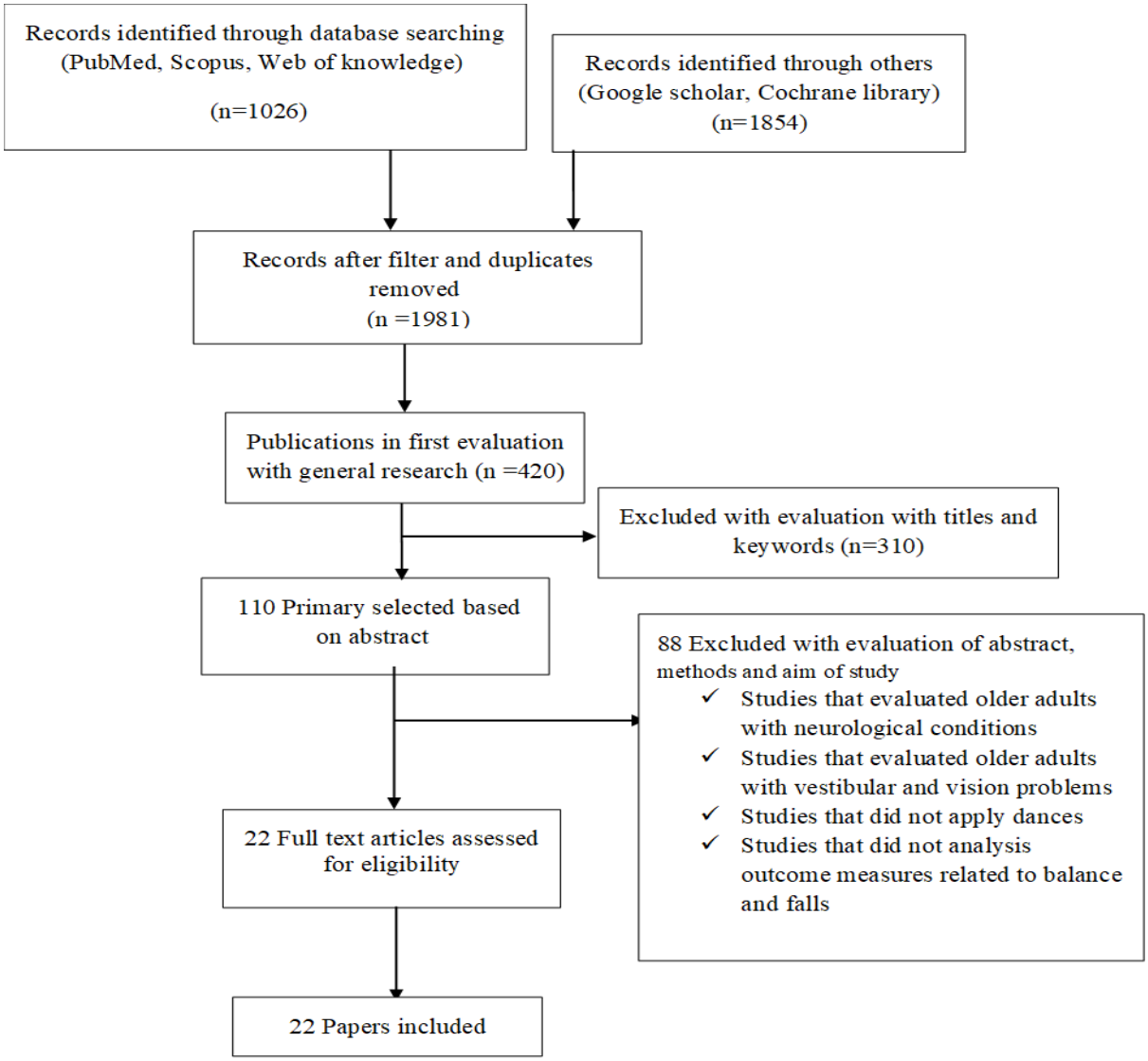

Figure1. The flow diagram of the study selection process based on PRISMA guideline.

Results

Considering the inclusion and exclusion criteria, 22 articles remained and were included in the review. The results of this review included details of sample population characteristics (sample size, gender of participants, and age of participants), study design, and types and duration of interventions.

Table 2. Dance-based interventions for fall prevention in the elderly people

First Author (Year) [Re]	Sample Size	Intervention	Results	Effects of interventions
Krejčí et al/2022[17]	500	Yoga	The findings illustrated that yoga-based interventions had a positive effect on the balance of older people. Yoga appears to have improved the balance by 0.4%.	The findings demonstrated that older persons who practice yoga experience an improvement in balance as a result of stimulation via dermal/subdermal pressure receptors maintained by afferent vagus nerve fibers.
Bartos et al/2022[18]	35	Yoga	The results demonstrated that participants would advantage from enrolling in yoga rather than an exercise program to diminish the risk of falls.	Yoga offers a complex and useful method for correcting body imbalance and human perception.
Jelita /2021[19]	90	Tai chi /yoga	Older people who participated in Tai Chi and yoga showed a greater balance. The yoga group has slightly improved balance over the Tai Chi group. The difference was found in balance scores between tai chi and control (36.7 vs. 6.2,) and between yoga and control (41.4 vs. 6.2).	Yoga's positive effects have been noted, including how it enhances balance by enhancing muscular strength, endurance, flexibility, gait, and mental health. Improvements in the balance are frequently linked to the outstanding advantages of tai chi in lowering the risk of falls. Due to participants' constant shifting of weight across a moving basis of support, it fosters more outstanding balance ability.
Boś et al /2021[20]	50	Pilates	The results showed statistically significant changes in the experimental group. Pilates influenced the balance of participants and reduced the risk of falls. Over the period of the three months of Pilates, the risk of falling fell by 48.6%, and the latter improved by 17.2%. In comparison to the initial measurement, the balance improved over the three months in the experimental group by 37.3% and in the control group by 14%.	By considerably increasing the elliptical surface, mean velocity, and stability limits, Pilates exercise had an impact on the seniors' balance.

First Author (Year) [Re]	Sample Size	Intervention	Results	Effects of interventions
Krejčí et al/ 2020[21]	234	Yoga	Yoga intervention significantly improved balance compared to the control group. Yoga enhanced static and dynamic balance by 4.54% and 3.03%, respectively.	The stimulation of dermal/subdermal pressure receptors, which are kept in place by afferent vagal nerve fibers, increases the balance of older persons who practice yoga, according to the findings.
Mortazavi et al/ 2018[22]	53	Tai Chi	The discoveries appeared that Tai Chi seem to diminish the risk of falls in the elderly after 8 weeks. The intervention group (Tai Chi) had a 44.2% decreased risk of falling when compared to controls (normal activity).	Because Tai Chi has been demonstrated to be useful in enhancing balance, proprioception, muscle strength, and endurance, it may be helpful in reducing the risk of falls in the elderly.
Hosseini et al/2018[23]	60	Tai Chi	It has to be noted that Tai chi is effective in improving balance and can be considered as a viable and valuable strategy for fall prevention for the elderly. Tai chi enhanced balance by 53%.	Tai chi improves a person's ability to apply efficient swing techniques and to perform regulated motions with improved balance control close to stability limitations.
Sousa et al/2017[24]	66	Aerobics/ combined aerobics and resistance exercise	Both exercise programs, combined with aerobic exercise or alone, are more effective than not exercising to reduce the risk factors for falls. Aerobics improve balance and reduce the risk of falls by 6.9% after 8 weeks, 11.59 after 16 and 24 weeks and 10 % after 32 weeks.	By enhancing postural control, mobility, and leg strength through aerobics, older individuals' balance and fall risk variables would improve.
Sofianidis et al/2017[25]	36	Pilates group / Dance	The findings demonstrated that both interventions had a positive effect on static and dynamic balance, with only a slight difference.	Pilates increases postural muscle strength, core stability, and neuromuscular activation, all of which are linked to better proprioceptive sensibility and therefore improve balance.

First Author (Year) [Re]	Sample Size	Intervention	Results	Effects of interventions
Zhao et al/2017[26]	61	ExBP /Tai Chi	The findings indicated that Tai Chi improved balance and decreased fall in the elderly by 11.97%.	Tai Chi can help elderly persons become more agile and balance, as well as more flexible in their upper bodies. It emphasizes on center of mass control and the coordination of upper and lower body motions, both of which have been shown to be advantageous for the underlying systems of balance control.
Dunsky et al/2017[27]	42	Aerobic step and stability ball	The main findings of the current exploratory study represent the positive effects of Aerobics on monitored physical activity programs on the balance of older women. It improved balance by 16.09%.	Intervention in this study is mostly based on muscular strength, which is an essential element of postural stability. More obvious adjustments in this component should result in a better increase in balance because it allows an individual to react quickly to COM changes.
Ansai et al/2016[28]	69	Combination of aerobic and resistance exercise	It should be noted that multi-component exercise interventions have shown greater results in reducing falls compared to resistance exercise protocols alone. Single-task (6.4%) and dual-task (10.5%) balance performance significantly improved in this study.	The senior participants' balance would improve by improving their muscle strength, flexibility, and endurance if they combined aerobic exercise with resistance training.
Nguyen/ 2016[29]	40	Yoga	Participants in the yoga group showed significantly better results in improving balance and preventing falls than participants in the control group. Yoga group showed significantly better results in comparison with those of Control group in the FES with p value from .05 to .001.	Yoga, which focuses on controlling posture and improving walking pattern, helps improve balance and reduce falls.

First Author (Year) [Re]	Sample Size	Intervention	Results	Effects of interventions
Nick et al/2016[30]	39	Yoga	It has been noted that yoga is a possible intervention to reduce the number of falls and improve the balance of the elderly. In this study yoga increased the balance by 26.03%	In yoga, stretching and maintaining balance are techniques for correcting posture. Furthermore, yoga can improve gait in order to enhance balance and prevent falls
Markovic et al/2015[31]	34	Huber group[1] / Pilates	Feedback-based balance and core resistance training have been found to be more effective than traditional Pilates training in improving the balance of older women. 0.53% balance improvement after Pilates indicated in this study.	Compared to typical Pilates training, Feedback-based balance and core resistance training was more effective at enhancing the balance of healthy older women because it enhanced their trunk strength, leg power, and body composition.
Merom et al/2013[15]	450	Dance	It should be noted that Dance is a fall prevention strategy and provides an approach to balance training for older people.	The 'holistic' practice approach applies to dance. It is a sophisticated sensory-motor rhythmic activity that combines a variety of physical, cognitive, and social components. All of these features have the ability to lessen a variety of physiological and cognitive fall risk factors.
Tousignant et al/ 2013[32]	152	Tai Chi exercises	Tai Chi has been very effective in reducing falls compared to traditional physiotherapy exercises. Those who practice Tai Chi are 30% less likely to fall than those who follow a regular physical therapy.	Tai Chi is a novel form of balance training that uses body movements and displacement to enhance balance and prevent falls.
Kim and O'sullivan /2013[33]	15	Aqua aerobic therapy	Aqua aerobic therapy is an effective exercise method for training older people to reduce their risk of falls. Subjects demonstrated decrease in the risk of falls about 30.29 %.	The senior participants' balance would improve after aqua aerobics. Because it improves the physical fitness, flexibility, and strength of participants, all of which boost a subject's ability to react to a disturbance.

[1] Feedback-based balance and core resistance training utilizing a special computer-controlled device

First Author (Year) [Re]	Sample Size	Intervention	Results	Effects of interventions
Zettergren et al/2011[34]	16	Yoga	Improved postural control and balance in this study showed that subjects profited from yoga intervention. Balance in the participants in this study increased by 6.79%.	Yoga increase hip extension range of motion and stride length, which helps the body stay balanced and prevents falls. They have been recognized as physical conditions that increase the risk of falling in older persons.
Irez et al/2011[35]	60	Pilates	Pilates exercises improved dynamic balance (22.13%) and reduce the incidence of falls in older women (40%).	Due to its numerous benefits for motor control, including enhanced proprioceptive sensibility, Pilates helps the elderly maintain their balance. by enhancing these fitness factors, Pilates reduces the number of falls among the elderly.
Krampe et al/2010[36]	11	Dance	An improvement in balance was seen after the intervention within the larger part of the participants. Most subjects indicated balance improvement of about 50% from baseline.	Major physical risk factors for falls in older people include loss of balance and diminished mobility. Dance helps older individuals stay active, promotes adherence, boosts motivation, and enhances balance and mobility, all of which help reduce falls.
Hakim et al/2010[37]	52	Tai Chi / yoga	Both tai chi and yoga exercise groups performed better than non-exercise groups. Tai Chi and yoga are both viable strategies that can be consolidated into a fall-prevention program for older adults.	Because Tai Chi uses slow, body-coordination-demanding movements, it has a good effect on balance. Yoga uses postural control and breathing practices to develop balance on the physical and emotional levels.

Details of Sample Population Characteristics of the reviewed articles

The total number of participants in the 22 studies in this review is 2188 older people. Among the 22 studies included in this review, according to table 2, the minimum sample size was 11[36], and the maximum was 500.[17]Most of the participants are predominantly women (66.37%). The participants in the eligible studies had a mean age of 72.45 years.

Details of study design of the reviewed articles

The study design of most papers was randomized controlled trials, including 9 RCT.[15, 22-24, 26, 28, 30-32] There are also 2 controlled trial studies,[29, 35] 2 pilot studies[34,

[36], and 2 experimental studies.[17, 21] In addition, the study design of other papers included in this review includes 2 cross-sectional studies,[19, 37] 1 randomized exploratory Study[27] and 1 comparative Study.[25] There are also 3 other studies in which information about the study design has not been reported or is not available.[18, 20, 33]

Details of types and duration of interventions of the reviewed articles

According to table 2, studies in this review have examined various dance-based interventions for fall prevention and balance improvement in the elderly. 6 studies have examined the effect of yoga,[17, 18, 21, 29, 30, 34] 4 studies have studied Tai chi[22, 23, 26, 32] and 2 studies have evaluated the effect of Tai chi and yoga.[19, 37] Pilates has also been used as an intervention in 4 studies,[20, 25, 31, 35] aerobics in 4 studies,[24, 27, 28, 33] and the effect of dance has been studied in 2 other studies.[15, 36] All of these 22 studies reported an improvement in balance and fall prevention after dance-based interventions in old people. These studies have shown that dances like yoga, tai chi, Pilates, and aerobics can help older adults stay healthy and reduce their risk of falling.

Studies on dance in older adults included similar short-term interventions of 10 weeks[22] and 8 weeks,[23, 27, 30, 31, 34, 37], although some were as short as four[17, 21], and six weeks.[36] A few studies in older people have investigated longer intervention periods of 3 months,[19, 20, 25, 29, 33, 35], 15 weeks,[32] 4 months,[18, 26, 28], 8 months[24], or as long as 1 year.[15] Older individuals had a wider range of training routines, while two to three times per week was the most typical. The duration of the dance sessions ranged from 30 minutes to an hour.

DISCUSSION

This literature review was developed to evaluate the effect of different dance interventions on balance and falls in old people. Balance impairment is one of the major issues among the elderly and is one of the greatest causes of falls in this populace. The studies in this review show that dance-based interventions improve balance and prevent falls in old people. This affects variables that contribute to balance and diminish the number of falls in old people. Tousignant et al,[32] Mortazavi et al,[22] Zhao et al,[26] and Hosseini et al[23] demonstrated that Tai chi was effective in improving postural balance and reducing the frequency of falls in the elderly. Tai chi training diminished dyskinesia by upgrading the capacity of the participants to use effective swing strategies (ankle or hip), and to perform controlled movements with improved balance control near stability limits. The Tai chi protocol emphasizes weight transfer and ankle sway, effectively moving the person's center of gravity towards the limits of stability, alternating between a narrow stance and a wide stance to continually change the base of support, expanding support-leg standing time and trailing-leg swing time. It rotates the trunk movements in an upright position and performs heel-to-toe (forward) and toe-toe (backward) step movements to increase dorsiflexion and sole flexion. These unique training properties can improve balance and postural control. Tai chi can be performed anytime, anywhere, and needs very little space and no special equipment. Anyone, including older people, can practice Tai Chi because of its low- to moderate-intensity traits and gentle, relaxing demeanor. Some Tai Chi styles may be difficult for older adults to learn without any prior expertise. Beginners should start with short forms first.

Hakim et al. detailed that both the Tai Chi and yoga exercise groups illustrated superior balance performance compared to

the no-exercise group,[37] while Jelita et al. indicated that the yoga group had slightly improved balance (single-leg stance (SLS)) over the Tai Chi group.[19] This happens because yoga is usually done barefoot on less steady surfaces, such as a mat or sand, while tai chi is usually performed on more stable, flat, harder surfaces, such as floor tile or ground. Practicing yoga on a less stable surface may increase the body's vagal action. Results showed that the balance of older adults who follow yoga increases due to stimulation via dermal/subdermal pressure receptors maintained by afferent vagal nerve fibers. Also, six other studies concluded that yoga could improve balance and decrease falls in old individuals.[17, 18, 21, 29, 30, 34] Yoga practice provides a sophisticated and practical approach to improving human body perception, and body imbalance, and these techniques reallocate attentional resources. This increased awareness helps correct asymmetry, improving balance, functional mobility, and self-efficacy. Yoga has public health implications in terms of fall prevention and balance improvement. Regular yoga practice by older persons has the ability to increase their flexibility, balance, and muscle strength—elements that lower their risk of falling and the occurrence of frailty. Older adults frequently have concerns about starting a yoga class because of their limited physical capacity and their current medical conditions. They frequently worry that they will hurt themselves and make their situation worse. Accessibility problems are another obstacle to practicing yoga. For some elderly people, the cost of taking yoga may be prohibitive.

Bos et al. demonstrated that Pilates could improve balance and reduce falls in old people.[20] They reported that Pilates training affected the balance of the seniors by significantly expanding the ellipse surface, mean velocity, and limits of stability. Also, a similar positive effect of Pilates on balance improvement and fall prevention in the old subjects were found in a study by Sofianidis et al.[25] They reported that Pilates improves multiple aspects of motor control such as postural muscles strength, core control, neuromuscular action, that are related to improved proprioceptive sensibility. This is consistent with the results of a study by Irez et al.[35] They showed that Pilates exercise decreases the number of falls in the elderly by expanding these fitness parameters, and Pilates exercise can be integrated into exercise programs for older adults in both fitness centers and rehabilitation centers. Moreover, they added exercise ball or Pilates ball exercises to the Pilates exercise program and demonstrated more advantages since it is more viable in expanding muscular strength. Nevertheless, Markovic et al. have illustrated that feedback-based balance and core resistance training were more effective in enhancing balance and lessening falls in older women when compared to conventional Pilates training.[31] Since it was more effective in improving trunk strength, leg power, and body composition of healthy older women when compared to traditional Pilates training. Given that the applied novel training was simultaneously more centered on balance, core stability and strength, and total body strength. Pilates has proven to be both affordable and secure when performed on a floor mat. It is promoted as one of the most effective strategies to achieve the objectives of Healthy Aging due to its holistic approach. It employs techniques that combine body and mind dualism, requiring flexibility, strength, and trunk stability as well as an emphasis on breathing, muscle control, and good posture. Additionally, Pilates is useful for clinicians, therapists, and other medical workers who care for the elderly. The investigation also shows that there are no

hazards or limitations to this procedure at all. The wide cultural and ethnic range of the studies examined further strengthens the advantages of this approach, minimising any potential contextual influence on the benefits claimed.

The results suggest that aerobics is effective in improving postural balance and reducing the frequency of falls in seniors. In this regard, Dunsky et al. reported the superiority of step aerobics (SA) over the stability ball (SB) in improving balance and preventing falls in the elderly.[27] An explanation for the superiority of the SA program is that whereas SB exercises are based on core muscle stabilization, SA exercises are based basically on muscular power, since the participants must lift their body weight relatively quickly. Since muscular power is a vital component of postural stability, because it enables an individual to react rapidly to COM changes, more noticeable changes in this component should lead to greater improvement in balance. Whereas during SB exercises, the muscles are working primarily in an isometric manner, during SA exercises, there is combined aerobic and anaerobic muscular work, which empowers the improvement of the cardiovascular capacity and the strengthening of stabilizing muscles. Ansai et al. also detailed that the combination of aerobic and resistance exercise increments the positive effect on improving balance and reducing falls in the elderly.[28] In addition, Kim and O'sullivan highlighted that aqua aerobic therapy is an effective intervention to reduce their risk of falling.[33] Since aqua aerobic training would increase the elderly participants' physical strength, flexibility, and balance, which would, in turn, help improve a subject's capacity to respond to a perturbation. Aerobic activity helps lessen the loss of strength, mobility, balance, and endurance brought on by inactivity, which is essential for older adults' safe performance of everyday tasks and fall prevention. However, it is advised that senior people consult their physician before beginning aerobics to be sure that their bodies can withstand the change.

The strength of this article is that it provides more comprehensive insights and information on the impact of dance-based interventions on balance and fall prevention in old people. The limitation of this review is that it is restricted to English papers published between 2010 and 2022. Also, like other qualitative reviews, this manuscript is limited by the author's prejudices. However, the subjective perspective provides a unique human insight into this complex subject. Although it has been demonstrated that dancing for extended periods can produce better outcomes, direct comparisons of the benefits of various durations or intensities of dance training have not been performed in studies. Because of this, it is unclear whether different kinds of dance interventions are best for the elderly population, and there are no clear indicators or suggestions in this regard. Nevertheless, this information would be very valuable for clinicians and physiotherapists to counsel old people about their expectations regarding functional recovery and to optimize rehabilitation and prevent falls.

RECOMMENDATIONS

We recommended that additional research in the future compare the various dance-based therapies and assess the effectiveness of combining them in preventing falls in older adults. Additionally, it is recommended that more RCT studies with larger sample sizes than previous studies be carried out in the future. Moreover, future studies can compare the effect of different durations or intensities of dance intervention. Another suggestion of our study is to focus more on the educational components and offer training programs on dance-based treatments for elderly persons and their caregivers in health centers. One suggestion is to use

various media to educate the public about dance-based interventions to treat balance issues effectively. Another recommendation is to investigate dance-based interventions further and put them in health promotion programs for the elderly in communities.

CONCLUSION

One of the problems that threaten the health of these people is balance disorders and falls. Dance-based therapies have appeared to improve balance and reduce the number of falls. Yoga, Tai Chi, aerobics, and Pilates showed positive effects on the risk of falling, such as balance disorders, poor posture control, and poor strength and physical performance. The effectiveness of dance-based interventions increased with their duration, and the elderly displayed superior benefits. Some elements of the studies such as the quality of the methodology, variation in the study design, and the absence of homogeneity in the variables and measuring tools made it difficult for us to determine which type of dance was more helpful in enhancing balance and preventing falls in the elderly. Therefore, the conclusion of this paper may have some significant implications for clinical care of the older population. Geriatric care should be thorough and tailored to the individual patient with a focus on improving balance and preventing or reducing falls. Such interventions should be seen as vital therapeutic elements that should be an integral part of the health promotion programs and treatment implementation process. In addition, older persons are actively encouraged to participate in some dance therapy or just to stay physically active, despite the fact that details about which kind of dance-based intervention is more effective are still unknown. This is because dance plays a vital role in fall management. To optimize the advantages and successfully address the severe consequences of falls, it is crucial for physicians to adhere to standards when recommending dance therapy for older populations.

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CONFLICT OF INTEREST

The authors declared no conflicts of interest

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