

Effect of Six Month Yogic Practices on the Management of Fear of Fall (FoF) in Elderly Women

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Abstract

The term fear of falling abbreviated as FoF is used for psychological concern or too much anxiety about falling. This fear restricts the physical movements of the elderly thereby may impact their mental and social wellbeing. To address this issue the present study was planned. 50 elderly females were selected for this single group pre-post study. The age range of selected elderly females was 60 to 70 years and they were chosen purposively. The selection of these elderly females was based on their Timed Up and Go Test (TUG). A six-month yoga program was framed and selected elderly females took part in it. Data was collected through TUG after 03 months and 06 months. The Repeated Measure ANOVA reveals that the time taken to finish the Timed Up and Go Test after 06 months was significantly reduced as compared to pre-test timings. It was concluded that six-month yogic practices were able to decrease the fear of falling in elderly females.

Keywords: Fear of Falling (FoF), Yoga, Elderly Females

INTRODUCTION

The fear of falling is a common concern among the elderly which is related to anxiety of loss of body balance and falls during physical movements. The fear of falls can be experienced by the elderly without a history of previous record of falls. The fear of fall manifests from a lack of confidence in physical abilities or mobility. The fear of fall gives rise to several disorders ranging from physical, mental and behavioural. The reduced physical activity further weakens muscles and the elderly have an even greater chance of falls. Walker and Howland (1991) reported that fear of falling in the elderly significantly reduces their health-related and quality of life. Numerous reports and scientific studies have reported fear of falls as a major cause of reduced mobility in the elderly with over 75% of cases occurring in developing countries. The prevalence of fear of fall was 42% in the elderly as reported in a study conducted by Dhar et al. (2022). Hence it is necessary to deal with the serious issue of fear of falling in elderly because they are the social backbone of our society. Due to limited healthcare resources, it is essential to look for some alternative measures to manage a fear of falling in elderly females and yoga has been advocated strongly. The benefits of yoga have been rich and they range from physical, mental, and social to psychomotor abilities. However, research on the efficacy of regular yoga practices in managing the fear of falling in elderly females is very few, hence the present study was planned.

REVIEW OF LITERATURE

Schmid et al. (2010) in this study reported that yoga practices of short duration were able to decrease the fear of falling in the elderly due to improved body flexibility and body balance. Malini et al. (2015) in their study reported a prevalence of fear of falling in the elderly at 51.9% which was considered extremely high. Choi and Ko (2015) reported a consistent decline in the functional mobility of the elderly due to fear of falling in a longitudinal study. Gothe and McAuley (2016) in their study reported that yoga practices are as good as stretching-strengthening to improve the functional mobility of elderly subjects. Bjerck et al. (2018) reported that fear of falling is inversely related to health-related quality of life in the elderly. Patel et al. (2019) found that four weeks of yoga practice was found to be beneficial in improving the balance of elderly subjects. Shin (2021) reported some benefits in terms of body balance and muscular strength in the elderly due to regular practice of yoga but the results are not statistically significant. Liang et al. (2023) in their study reported that yoga promotes relaxation and helps reduce stress which eventually becomes more useful for the elderly in maintaining body balance.

Objective of the Study

To find the effect of 06 months yoga program on the possibility of decreasing the fear of falling in elderly females.

Hypothesis

It was hypothesized that a six-month yoga program would significantly reduce the fear of falling in elderly females.

METHODOLOGY

Sample :

50 elderly females were selected for this single group pre-post study. The age range of selected elderly females was 60 to 70 years and they were chosen purposively. The selection of these elderly females was based on their Timed Up and Go Test (TUG) performance with a timing of less than 13.5 seconds were considered for selection.

TOOLS

Timed Up and Go Test (TUG)

The Timed Up and Go (TUG) test was employed to assess the risk of fear of falling. This test involves measuring the time it takes for an elderly participant to rise from a chair, walk a distance of 10 feet at a normal pace, turn around, walk back the same distance, and sit down again. The TUG test is recognized for its high reliability and validity. A completion time exceeding 13.5 seconds indicates a moderate risk of fear of falling among older adults.

Yoga Program:

A six-month yoga program was developed with input from expert yoga instructors, keeping the physical condition of the elderly females participating in this study. As a result, a 45-minute daily yoga routine, scheduled for six days a week, was designed. The routine comprises a sequence of activities, including prayers, asanas, pranayama, Surya Namaskar, and meditation for elderly females.

Procedure

50 elderly females aged 60 to 70 years with recorded TUG test timings of more than 13.5 seconds were selected. The selected elderly females were given 06 months of supervised yoga program. The data on the Timed Up and Go Test was again assessed after 03 months and 06 months. Results are given in Tables 1 and 2.

RESULT AND DISCUSSION

Table 1
Repeated Measures ANOVA- Scores of Elderly Females on Timed Up and Go Test

Study Periods	N	TUG Test (Sec.)	
		Mean	S.D.
Pre-test	50	14.04	1.90
After 03 months	50	13.46	1.71
Post-test (After 06 months)	50	13.05	1.94

Table 2 ANOVA Summary

Source	Degree of Freedom (df)	Sum of Squares	Mean Square	F	Sig.
Within Subject	02	24.465	12.232	8.75	p<.01
Error	98	136.909	1.397		

F=8.75, reported in Table 1 indicate a significant difference in Timed Up and Go Test timings of elderly females during the different stages of the study period at 0.01 level of statistical significance.

Table 2(a)

Pairwise Comparisons of Mean Timings of Elderly Females on TUG Test in Various Study Periods

Mean (I)	Mean (J)	Mean Difference (I-J)
Pre-test (M=15.16)	After 03 months (M=15.06)	0.58*
	After 06 months (M=13.97)	0.98*
After 03 months (M=15.06)	After 06 months (M=13.97)	0.40 ^{NS}

* Significant at .05 level, NS - Not Significant

A perusal of Table 2(a) indicates a significant difference in the mean time taken by elderly females after 03 months of the yoga program on the TUG test as compared to their mean pre-test timing. The mean difference of 0.58 reveals a significant decrease in the mean time taken by elderly females to complete the TUG test after 03 months of the experimental period as compared to their pre-test mean timings.

A perusal of Table 2(a) indicates a significant difference in the mean time taken by elderly females after 06 months of the yoga program on the TUG test as compared to their mean pre-test timing. The mean difference of 0.98 reveals a significant decrease in the mean time taken by elderly females to complete the TUG test after 06 months of the experimental period as compared to their pre-test mean timings.

The mean difference in timing after 03 months and 06 months of the experimental period was statistically non-significant.

The connection between yoga and a reduced risk of falls can be explained through various theoretical frameworks. From a psychomotor and biomechanical standpoint, yoga improves proprioception, enhancing the body's awareness of movement and position. Additionally, yoga strengthens physical capabilities, which helps build confidence in the elderly regarding their physical stability, thereby gradually alleviating their fear of falling. The findings of this study align with earlier research conducted by Dibenedetto et al. (2005), Schmid et al. (2010), and Zeetergren et al. (2011).

CONCLUSION

Based on the results it can be concluded that yoga as an alternative therapy is beneficial in decreasing the fear of falling in elderly females. Hence yoga can be used as a non-pharmacological intervention can be safely used to address the issue of fear of falling in the elderly in a cost-effective manner.

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