

ISSN: 2456-4419

Impact Factor: (RJIF): 5.18

Yoga 2021; 6 (1): 103-106

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www.theyogicjournal.com

Received: 12-11-2020

Accepted: 30-12-2020

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Comparison of the functional mobility of former state level elderly sportsmen from different games in Kerala

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Abstract

The purpose of the study was to compare the Functional Mobility of the former state level elderly sportsmen from different games in Kerala, India. 180 former state level elderly sportsmen from different games from Kerala were selected as the subjects for the study. The age of the subjects ranges from 65 to 70 years. The subjects under the study were divided in to six groups (N=30) based on their sports events. The six Groups are given below: Group A - Football; Group B - Kho; Group C - Basketball; Group D - Badminton; Group E - Volleyball; Group F - Cricket. Timed Up and Go (TUG) Test was used to measure the Functional Mobility of the subjects under the study. ANCOVA & Scheffe's Post Hoc test were used to determine the difference between the different Groups under the study. The findings of the study revealed that Football, Kho and Basketball Players have better functional mobility than Badminton, Volleyball and Cricket players.

Keywords: Functional Mobility, Timed Up and Go (TUG) Test & Elderly Sportsmen

Introduction

During the later adulthood stage which begins with the age of sixty, most of the elderly sportsmen are retired from their sports career and stopped playing because they are suffering from various health issues accompanied by aging process and the fear about the physical and psychological health is also prevalent. In our society, the elderly sportsmen are typically perceived as not so active, deteriorating intellectually, narrow-minded and attaching significance to religion. Many of the elderly sportsmen lose their spouses and suffer from emotional insecurity. However, this may not be true of everybody. Many elderly sportsmen at the age of sixty or above remain very healthy and active in life. When elderly sportsmen face illness or chronic disabilities, they feel a loss of personal control and as result the helplessness and social isolation increased. The goal of applied health and social scientists is to change the shape of the human survival curve so that most individuals can live long lives. Several controllable factors such as food restriction and nutrition, general activity level and physical activity have some promise in fulfilling that goal. Most elderly sportsmen would agree that long life without health and physical mobility is undesirable, yet many elderly sportsmen live their terminal years in a state of morbidity or complete physical dependence and poor health. The quality of life in the elderly sportsmen particularly frail or injured elderly sportsmen is affected by nine major factors: health status, physical function, energy and vitality, cognitive and emotional function, life satisfaction and feeling of well-being, sexual function, social function, recreation and economic status. Most of these factors highly interact with each other. The purpose of the study was to compare the functional mobility of the former state level elderly sportsmen from different games in Kerala, India.

Methodology

Subjects

180 former state level elderly sportsmen from different games from Kerala were selected as the subjects for the study. The age of the subjects range from 65 to 70 years. The subjects under the study were divided in to six groups (N=30). The six Groups are given below: Group A - Football; Group B - Kho; Group C - Basketball; Group D - Badminton; Group E - Volleyball; Group F - Cricket.

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Test

Timed up and go (TUG) test

Purpose

To measure the functional mobility of the subject

Equipment

Standard Chair, Measuring Tape and Stop Watch

Procedure

The subject was asked to sit on the standard armchair (seat height 46 cm and arm height approximately 65 cm) with back against the chair and arms resting on the chair’s arms. On the command ‘go’, he got up and walked at a comfortable and safe pace to the line marked on the floor three metres away, turned, returned to the chair and sat down again.

Scoring

The time taken to complete the task was recorded to the nearest one tenth of a second.

Procedure

180 former state level elderly sportsmen from different games were selected as the subjects for the study. The subjects under the study were divided in to six groups (N = 30). The six Groups are given below: Group A - Football; Group B- Kho Kho; Group C - Basketball; Group D- Badminton; Group E- Volleyball; Group F- Cricket. Prior to the test, the details regarding the objectives of the study, test procedure are explained to the subjects under the study. The necessary data will be collected by administering the test for the chosen variable.

Statistical analysis of data

ANCOVA & Scheffe’s Post Hoc test were used to determine the difference between the different Groups under the study.

Results

The data pertaining to the subjects under the study were analyzed by ANCOVA & Scheffe’s Post Hoc test with the help of SPSS version 17. Findings pertaining to the functional mobility of the elderly sportsmen from different games from six different games which were subjected to analysis of covariance have been presented in the table 1.

Table 1: Difference in means of the former state level elderly sportsmen from different games from six different games in Kerala in functional mobility

| Variable | Sources of variance | DF | Sum of square | Mean square | ‘F’ value |
|---------------------|--------------------------------|----------|---------------|----------------|-----------|
| Functional mobility | Within group Between groups | 173 5 | 4.57 6.249 | 0.026 1.250 | 47.35 * |

*Significant at 0.05 level of confidence
F 0.05 (5, 173) = 2.21

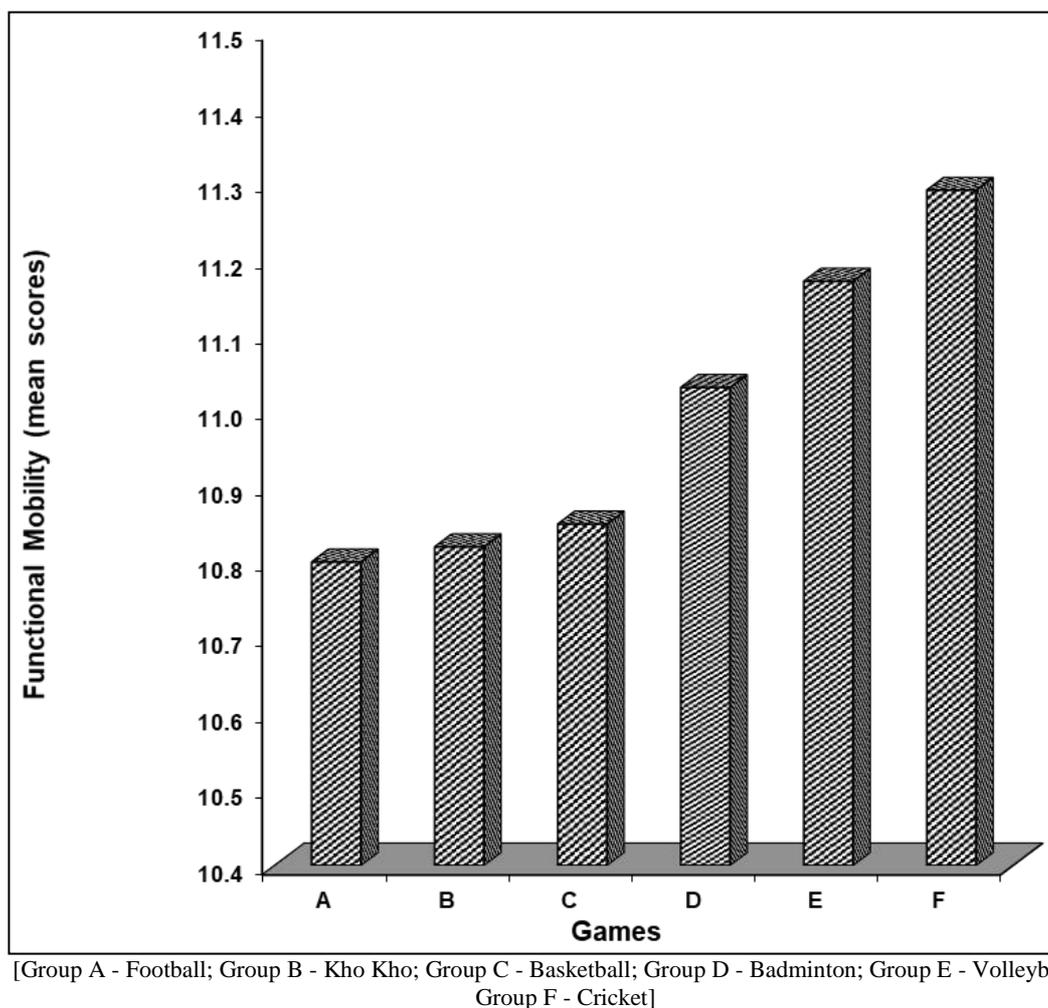
As the ‘F’ value was found to be significant in the case of the selected variable, the Scheffe’s Post Hoc test was applied to test the significance of the difference between the paired means separately for the functional mobility of former state level elderly sportsmen from six different games in Kerala which was presented in table 2. The mean difference of the functional mobility of the subjects under the study for the selected variable is presented in figure 1.

Table 2: Difference between the paired means separately for the functional mobility of the former state level elderly sportsmen from different games from six different games in Kerala

| Group A | Group B | Group C | Group D | Group E | Group F | Mean difference |
|---------|---------|---------|---------|---------|---------|-----------------|
| 10.80 | 10.82 | | | | | 0.12 |
| 10.80 | | 10.85 | | | | 0.26 * |
| 10.80 | | | 11.03 | | | 0.44 * |
| 10.80 | | | | 11.17 | | 0.47 * |
| 10.80 | | | | | 11.29 | 0.49 * |
| | 10.82 | 10.85 | | | | 0.14 |
| | 10.82 | | 11.03 | | | 0.32 * |
| | 10.82 | | | 11.17 | | 0.35 * |
| | 10.82 | | | | 11.29 | 0.37 * |
| | | 10.85 | 11.03 | | | 0.18 * |
| | | 10.85 | | 11.17 | | 0.21 * |
| | | 10.85 | | | 11.29 | 0.23 * |
| | | | 11.03 | 11.17 | | 0.03 |
| | | | 11.03 | | 11.29 | 0.05 |
| | | | | 11.17 | 11.29 | 0.02 |

*Significant at 0.05 level of confidence. The computed value of critical difference at 0.05 level is 0.97.

[Group A - Football; Group B - Kho Kho; Group C - Basketball; Group D - Badminton; Group E - Volleyball; Group F - Cricket]



[Group A - Football; Group B - Kho Kho; Group C - Basketball; Group D - Badminton; Group E - Volleyball; Group F - Cricket]

Fig 1: Functional mobility of the former state level elderly sportsmen from different games from six different games in Kerala (means in seconds) are presented in figure 1

Discussion

The analysis of the results revealed that Football, Kho Kho and Basketball Players have better functional mobility than Badminton, Volleyball and Cricket players. Functional Mobility is a person's ability to interact with their environment effectively. This includes being able to walk their environment effectively. This includes being able to walk around the house, do daily tasks, bath/shower, eat/feed, Drive or any other functional task. The functional mobility required by an individual is dependent on the functions that he needs to perform. Factors contributing to the improvement of Functional Mobility are the flexibility of the hip joint and the strength of back, leg and abdominal muscles. Playing games like Football, Kho Kho and Basketball might have helped to improve the strength of abdominal muscles and the improvement of the strength and flexibility of the back muscles. Playing games like Football, Kho Kho and Basketball might have helped to improve the flexibility of the hip joint and attributed to the improvement of the strength of the leg muscles. All of these factors may contribute to enhance the functional mobility of Football, Kho Kho and Basketball Players than the players of other games.

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