Abstract

Effect of Customized Program on Functional Fitness of Secondary School Female Teachers from Mumbai

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Objectives
To examine the effects of Customized Program of functional fitness on Secondary School Teachers in Mumbai, and to undertake a follow-up study for evaluating the retention effects of Customized Program.

Introduction
Functional fitness is defined as having the physical capacity to perform normal everyday activities safely and independently without undue fatigue and includes. Components such as upper body muscle strength, lower and upper body flexibility, aerobic endurance, agility and static balance.

Modern life in general is much easier with so many forms of labour saving technology available. So, most of people can make it through the day with very little physical activity. This, sedentary lifestyle has been classified as a primary risk factor in cardio vascular disease approaching towards hypertension. Today women have proved their mettle in every field and in every sphere. The status of women in modern India is a sort of paradox. Teaching as a profession is mostly chosen by women. Today we find that they ignore themselves, they need to give themselves some quality time every day, this means with respect to their health and fitness. Women have other responsibilities along with teaching. They have to maintain their other responsibilities too like family, children, spouse, and house hold chores as well as maintaining personal and professional life, which is not an easy task. Specially talking about Mumbai which is a metropolitan city, people are always tied up in heavy schedules having busy lifestyles. Thus teachers in Mumbai too have a hectic life, reaching school on time after travelling long distances, performing various responsibilities both at home and at school. This indeed leaves them with practically no time for themselves. But at the same time, it is of paramount importance to see that they are physically as well mentally fit.
Teaching consists of many multifarious, interrelated activities; these include updating of knowledge and keeping in touch with latest information with respect to methodology and scientific perspective. Teachers also need to have administrative and management skills to deal with their peer management. Therefore the purposes of this study were to evaluate the effects of customized program on functional fitness on secondary school teachers in Mumbai.

**Methods**

Sixty secondary school teachers were initially recruited to take part in a nonequivalent control group designed to investigate the effects of an eight week exercise training program of functional fitness. Twenty subjects were assigned to the one group that was module I (SuryaNamaskar and Omkar chanting), and Twenty subjects were assigned to second group that was Module II (Assistive yoga and Pranayama.) Twenty subjects were assigned to the third group that was control group no treatment was given to this group. Values for the exercise group compared to the control group were analyzed. All participants had medical clearance to participate in the testing, training, and retention program. Normal activities of daily living were maintained during follow up, but none of the subjects participated in any exercise program.

**Intervention**

Designing the intervention was done by taking expert advice and suggestions. The modules designed were tried out through a Pilot study conducted on 10 subjects. The pilot study was also used for establishing test Reliability to check efficacy of treatment, by computing the correlation co-efficient, which was found between 0.80 to 0.95. Keeping in mind that subjects age, gender, fitness, and profession these two Modules has been designed. Training was imparted by experienced and professionally qualified trainer and Yoga experts for 45 min. in a day (morning) and every day. The treatment was given on weekdays except Sundays, for a total period of at 8 weeks. Gr. I received treatment that was Module-I SuryaNamaskar and Omkar Chanting, Gr.II was Module-II = Assistive Yoga and Pranayama. Gr.III acted as ‘Control Group’ pre test was given prior to treatment. The treatment in each Module consisted of 1. Warming up 2. Treatment 3. Rest 4. Cooling Down. After completion of the eight
weeks of treatment post test was given, then after 8 weeks no treatment was given but, a follow up test was taken. Treatment Program was progressively designed with progressive repetitions, time and rest.

**Measurements**

Both groups were tested before training (pre-training) and after training (post-training) and follow up (after eight weeks of post test). On the test day, subjects first completed a 10 minute warm up led by an exercise instructor and then completed the functional fitness test items, Aerobic endurance measured by 12 min. Run/Walk after finishing 12 min run or walk it was recorded in Minutes and Seconds. Agility was measured by T-test two trails were given and best was recorded in Minutes and Seconds. Flexibility was measured by Sit and Reach Test Three trials were given with the best score recorded to the nearest centimeter. Static balance was measured by Stork stand the score was given by the time in seconds for the duration of the maintenance on the ball of foot as described in the test administration. Muscular Strength of upper body was measured by Modified Push-ups repeat as many times as subject can do in 60 seconds, which Counted in numbers.

**Statistical Analysis**

Raw data were processed using descriptive statistics. Further, they were analyzed using inferential statistics Repeated Measure ANOVA. This was followed by LSD Post Hoc test. All data are presented as means (SD). Data was analyzed using SPSS 17.0 software. Repeated Measured ANOVA was performed to determine changes over time for functional fitness tests. The level of significance was set at 0.05. Post hoc analyses were conducted using LSD test to examine within-group differences between baseline values and those after eight weeks of training the significance criterion was to 0.01, 0.05.

**Results**

Group I that was Module I (SuryaNamaskar and Omkar chanting) Consisted of twenty secondary school female teachers, and Group II that was Module II(Assistive yoga and Pranayama) consisted of twenty secondary school female teachers, were compare
Results from the Repeated Measures ANOVA indicated a significant difference when compared with control group, in the case of both modules compared to each other no significant difference was found.

**Discussion**

The statistical analysis has revealed that both the modules, Module I (SuryaNamaskar and Omkar Chanting), and Module II (Assistive Yoga and Pranayam) have shown a positive effect in improving Functional Fitness. This finding corresponds to Cowens, V.S.’s work which found improvements in Functional Fitness in a Worksite yoga initiative. However there is no significant difference found between the two modules, meaning that both programs are effective and none is better than the other. This could be attributed to the fact that it has been proved scientifically that the traditional forms have an impact in improving various fitness factors. However, all the factors of Functional Fitness do not seem to respond to the treatments similarly in both the Modules. In Module I (SuryaNamaskar and Omkar Chanting) but for Flexibility and Muscular Strength, the other three factors have shown significant improvement, while in Module II (Assistive Yoga and Pranayam) all the five factors have shown significant improvement. It is therefore apparent that the use of props in Assistive yoga have facilitated the subjects to attain the correct posture and hold the same for longer duration, thereby giving them the maximum benefit of the asanas; which was not so in Module I, where they had to get into the different positions by themselves and were limited by their functional ability. This is substantiated further by findings by Kristine, A & Joseph, A. who also agree that the intensity of the activity make the regimen easily accessible. Paul, P., Hayden, J., Iyengar, B.K.S., et. al. further clarify that the use of props have a profound effect if correctly sequenced. Thus we can say that Assistive yoga and Pranayam helps to improve Functional Fitness as compared to SuryaNamaskar and Omkar chanting. The study also supports the use of SuryaNamaskar which is a composite of several Asanas, and propounds it to be beneficial for improving Functional Fitness.
Follow up Study
The follow up study shows negligible improvement in Functional Fitness in Module I (Surya Namaskar and Omkar Chanting) with a slight improvement in Module II. With respect to the factors, there is a significant improvement in Agility, Flexibility and Muscular Strength in Module I (Surya Namaskar and Omkar Chanting) and Aerobic Endurance, Agility, Flexibility and Muscular Strength in Module II (Assistive Yoga and Pranayam). This indicates that Functional Fitness cannot be retained easily, and one needs to put in one’s sustained and consistent effort to maintain one’s Functional Fitness, in simple terms, one must exercise regularly. The most important finding is that there seems to be no retention effect in both Modules with respect to Balance. This highlights the need to continue lifelong practice for maintaining balance. In fact it is seen that balance scores are less than the Pre-test also in the follow up. The other factors show retention effect in both Modules, but the level is low, Aerobic endurance has shown no retention only in Module I.

Conclusion
The traditional forms Suryanamaskar and Omkar chanting, and Assistive yoga and Pranayama are effective in improving Functional Fitness of The Secondary School Teachers from Mumbai.

Recommendations
Functional Fitness is crucial for one’s existence and hence training should to be continued for a sustained effect on the body. Such facility should be made available at work site. The Government should make available such facility in all schools as well as colleges so that teachers could be functionally fit. Literature should be published in the regional languages and Workshops in Functional fitness should be conducted for teachers so as to sensitize them. Counseling centers should be set up for the common man, who cannot afford expensive gymnasiums.
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