

Combination of Yoga Practice and Aerobics Training for Health Related Physical Fitness for School Girls

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Abstract

The idea of the concept of health related fitness was clicked among the researchers of AAHPERD, while most of the American children failed in Kraus-Weber's Muscular fitness test. Many studies, however, indicate that the school going students are inclined towards obesity which affects adversely the normal improvement of physical fitness. Gradually, the concept of muscular fitness remained far behind and today, the challenging as well as rising concept is a "Health Related Physical Fitness". In India, very few researchers' remained in the front line towards the assessment as well as implication of AAHPERD Health Related Physical Fitness Test for school children (Ganguly, Bera&Gharote, 2003; Pargaonkar, 2003) however, no report in this line for upper primary school girls so far is available. On the basis of this background, it was thought desirable to undertake this piece of research. Aerobics exercise generate one's body heat that enhances sweat rate, throws toxins from the body and our cardio respiratory system gets training for efficient functioning. Yoga, on other hand, is equally important to the girls students to meet the normal improvement of factors of physical fitness in growing age. The present study has been conducted with a view to prepare training programme in Aerobics, Yoga and combination of Yoga and Aerobics and to impart them as training intervention in experimental set up. The investigation was carried out in J.B. Vachha High School, Dadar, Mumbai, for upper primary Parsi girls (N=100), aged 11 to 12 years, who were randomly divided into four groups (i.e., aerobics, yoga, aerobics plus yoga and control) Yoga in combination with aerobics is suitable training strategy for improving overall level of health related physical fitness of the upper primary school girls.

Introduction

For years, the health related physical fitness status of human as known. People, therefore, used to believe that high level of physical fitness contribution to good health. Today, such belief has become a misconception. In fact, high-level physical fitness has an excellent link towards exhibiting top performance and it no consistent relationship towards one's good health. Although worldwide nations are using AAHPERD's Test Battery to assess the level of Health Related Physical Fitness of school children, yet the development of norms for individual nation is the need of the day. With this background, this piece of research has been undertaken.

Yoga is one of the dominated aspects of the secret and mystical side of Indian religion. The word 'Yoga' is generally associated with yogi, a saint and sounds rather religious. Aerobics exercise generate one's body heat that enhances sweat rate, throws toxins from the body and our cardio respiratory system gets training for efficient functioning.

Today what is in vogue are these Hathyogic practices i.e. Asanas, Pranayamas, Bandhas, Mudra, Kriyas etc., which are known to contribute to the physical as well as mental well being. Muscle Aerobic significantly improves one's cardiovascular system because it is an aerobic exercise program. Therefore it will increase one's heart size and strength, enabling one's heart to pump more blood with each stroke during exercise and rest. All this results in a lowered resting heart rate. One's heart will rest more between contractions. In other words, by straightening the heart, one increases its efficiency as a pump. A heart that beats more slowly and less frequently required less oxygen for its own work. Aerobics Exercise is one of the fine Exercise which help in the development of three S that is Strength, Stamina and Suppleness (Flexibility) that represents the three components of physical fitness.

Methodology

The investigation was carried out in the J.B.Vachha High School, Dadar, Mumbai, for upper Primary girls (n=100), aged 11 to 12 years who were randomly divided into four equal groups viz., Exp. Gr.I, ExpGr.II, Exp. Gr.III and Control group consisted of 25 students.

Design

After the pre-test with the AAHPERD HEALTH Related Physical Fitness Test Battery, The Exp.gr.I underwent a training programme of selected yogasanas, Exp.Gr.II received training of aerobic exercise, Exp. Gr.III was exposed to a training of combined stimulus (i.e., both aerobics and yogasanas) and control group did not participate in any of the above training programme. All the training programmes have been conducted daily 1 hour in the evening, six days in a week except Sundays and holidays, for a total period of 6 weeks. However, the combined stimulus was arranged in the alternative days. It is important to note that all the subjects had to continue their daily programme of the school. In fact, the duration of the experimental period was 6 weeks. After the experimental period is over, the subjects of all the groups were posted-tested with the items of the AAHPERD HEALTH Related Physical Fitness Test Battery.

The Health Related Physical Fitness was considered as the main dependent variable as selected in this study. The variable has some components viz., strength and endurance of the abdominal muscles, flexibility, body fats% and cardiovascular endurance, which were measured scientifically by the AAHPERD HEALTH Related Physical Fitness Test. Here training intervention (i.e., Yogasanas& aerobics) were considered as the independent variables.

TABLE

Central Tendency and Dispersion of Experimental and Control Groups in Physical Fitness Variables

Health Related Physical Fitness Variables	Mean Scores (SD) of Groups							
	Experimental Group (B)							Control Group (C)
	B1(Aerobics)		B2(Yoga)		B3(Aerobics + Yoga)			
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Cardiovascular Endurance (A1) (secs)	656.48	636.79	664.23	638.92	652.84	598.13	660.64	658.39
Flexibility (B1) (Cms)	17.23(2.43)	22.54(3.53)	18.65(3.28)	35.87(4.12)	15.983.38	25.48(2.46)	16.76(3.22)	19.54(3.19)
Abdominal Muscle Strength &Endurance(A3) (No./min.).	19.75(1.20)	23.78(1.66)	18.43(1.05)	27.28(1.43)	17.54(1.35)	31.78(1.88)	18.49(1.85)	19.69(1.59)
Body Fat (A4)%	33.65(4.03)	26.76(3.59)	34.72(3.28)	25.59(2.98)	32.08(3.86)	23.43(3.79)	34.05(2.99)	33.77(4.18)

Descriptive statistics have been applied to process the data. Further, 2x4x4 Factorial ANOVA followed by Scheffe's post hoc test were employed to record the significant improvement.

DISCUSSION:

Aerobics, Yoga and Yoga and Aerobics showed significant reduction over the control group. Experimental group (Yoga plus Aerobics) showed significant superiority over the Aerobics group and yoga in cardiovascular endurance, flexibility and abdominal muscle strength and endurance and body fat test.

CONCLUSION

Combined stimulus i.e., Yoga plus Aerobics training improves cardiovascular endurance and abdominal muscle strength and endurance and maintains Body fat at normal level as compared to the Aerobics and Yoga practiced separately. Yoga training alone could effectively increase flexibility than other training interventions. Yoga in combination with aerobics is a suitable training strategy for improving overall level of health related physical fitness of the upper primary school girls.

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