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Effect of yogic practices on selected locomotor skills of school children

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Abstract
The study aimed to determine the effect of yogic practices on selected locomotor skills of school children. For this purpose, sixty (N=60) children were selected from Chennai District, Tamil Nadu, India. The Subject's age ranged between 12 to 14 years. The selected subjects were divided into two groups of thirty subjects, experimental and control groups. This study uses the following locomotor skills Run, Gallop, hop, leap, horizontal jump, skip, and slide. The selected dependent variables were assessed by using the Test of Gross Motor Development PRO-ED. The collected data on the selected variables were treated with a dependent "t" test at a 0.05 level of significance. The results of the study indicate that there was a significant improvement in locomotor skills due to the effect of 12 weeks of Yogic practice.

Keywords: Yogic practices, locomotor skills, motor skills, children

Introduction

Locomotor Movement

The locomotor basic motion is the basis of a child's movement to move places by moving the body from one point to another such as walking, running, jumping, sliding, skipping, hopping, galloping, and leaping. By mastering basic movements, children get many benefits for their daily lives. The skills used by an individual to move from one place to another. These skills include rolling, balancing, sliding, jogging, running, leaping, jumping, hopping, dodging, galloping and skipping.

Locomotor skills

Locomotor skills help us move from one place to another. This movement can take place in different directions and with varying speeds. Children can develop locomotor skills starting at birth when they begin to wiggle and squirm, roll over, army crawl, crawl, kneel walk, and then walk.

Importance of locomotor skills

Children need to move from one location to another throughout their daily lives. The other more extensive answer is that using these skills provides opportunities to develop a healthy lifestyle with daily physical activity. Locomotor skills help our bodies with cardiovascular health, endurance, balance, coordination, enjoyment of sports, healthy weight, independence, and functional skills.

Yoga

Yoga, in Sanskrit, means to completely know yourself and to be at peace with yourself. It is not possible to define this peace except to say it is freedom from all suffering, freedom from doubt, and freedom from confusion. A natural blessedness unfolds in you as you feel this peace and you increasingly realize this is the essence of your life. This realization is called yoga a clear knowledge of the oneness of yourself with the source of all life. Yoga is a practical aid, not a religion. Yoga is an ancient art based on a harmonizing system of development for the body, mind, and spirit. The continued practice of yoga will lead you to a sense of peace and well-being and also a feeling of being at one with your environment.

Benefits of yoga

Yoga improves strength, balance and flexibility.
Yoga helps with back pain relief.
Yoga can ease arthritis symptoms.
Yoga benefits heart health.
Yoga relaxes you, to help you sleep better.
Yoga can mean more energy and brighter moods.
Yoga helps you manage stress.
Yoga connects you with a supportive community, Yoga promotes better self-care.

Purpose of the study

The purpose of the study was to find out the effect of yogic practices on selected locomotor skills of school children.

Hypothesis

It was hypothesized that there would be a significant improvement in locomotor skills namely run due to Yogic practices of school children.
It was hypothesized that there would be a significant improvement on improvement in locomotor skills namely gallop due to Yogic practices of school children.
It was hypothesized that there would be a significant improvement in locomotor skills namely hop due to Yogic practices of school children.
It was hypothesized that there would be a significant improvement in locomotor skills namely leap due to Yogic practices of school children.
It was hypothesized that there would be a significant improvement in locomotor skills namely horizontal jump due to Yogic practices of school children.
It was hypothesized that there would be a significant improvement in locomotor skills namely skip due to Yogic practices of school children.
It was hypothesized that there would be a significant improvement in locomotor skills namely slide due to Yogic practices of school children.

Delimitations

1. Only sixty school children were selected as subjects from the Chennai district only.
2. The age group of the subject was 6 to 10 years only.
3. Only locomotor skills namely Run, Gallop, hop, leap, horizontal jump, skip, and slide were selected as dependent variables.
4. Yogic practices were selected as the independent variable for 12 weeks.

Limitations

1. The difference that exists among the subjects due to varied factors such as heredity, food habits, family type, weight, and health factors would not be considered.

Review of related literature

Aggeliki Tsapakidou and Evridiki Zachopoulou (2001) conducted the Effect of a music and movement program on the development of locomotor skills by children 4 to 6 years of age. This study investigated the effect of a 10-week music and movement program on the quality of locomotor skills in children 4 to 6 years of age. Sixty-eight children (35 boys and 33 girls) served as subjects. The Test of Gross Motor Development (Ulrich, 1985) was used for the assessment of locomotor skills (running, skipping, galloping, hopping, leaping, sliding, and horizontal jump). Thirty-five children participated in the exercise program twice a week while the rest did not participate in any organized physical activity program. In the absence of significant differences between the two groups in the pre-test, multivariate analysis of variance (2X2 Manova) with repeated measures was used for data analysis. The results revealed a significant measure of X group interaction on galloping, leaping, horizontal jump, and skipping. From the comparison of the groups' mean differences, it was shown that the experimental group had significantly greater improvement in the above skills than the control group. It seems that a music and movement program can improve significantly the quality of certain more complex locomotor skills.

Methodology

Selection of subjects: The purpose of the study was to find out the effect of yogic practices on selected locomotor skills of school children. For this purpose, sixty (N=60) children were selected from Chennai District, Tamil Nadu, India. The subject's age ranged between 12 to 14 years. The selected subjects were divided into two groups of 30 subjects each namely experimental and control group. The experimental group underwent 12 weeks of Yogic practices. The control group was not allowed to participate in any kind of treatment. The selected locomotor skill variables such as run, gallop, hop, leap, horizontal jump, skip, and slide test used for this study. The selected dependent variables were assessed by using the Test of Gross Motor Development PRO-ED by D.A. Ulrich and were treated by using a paired t-test. The level of confidence was fixed at 0.05 level.

Training Schedule: The yoga training consisted of Loosening Exercises, Asana, Pranayama, and Meditation. All practices were introduced slowly and progressively. Yoga training was for 45 minutes, for 6 days a week for 12 weeks. The experimental group practiced Yoga asanas (postures) and Pranayama (breathing techniques). Each asana pose was held for 15–30 sec initially and for 3 min in the later stages. The duration of Pranayama was 2–3 min initially and was gradually increased to 4 min. The loosening exercises included hand rotation front & back, twisting, side arch hand right & left, forward & backward bending, and side bending. Each exercise was performed for 5 minutes. Standing asanas include Ardhakati Chakrasana, Ardha Chakrasana, Padahastasana, Trikonasana, and Tadasana. The sitting position asana were Vajrasana, Ushtrasana, balasana and padmasana. The supine pose asana practiced were Halasana, Setu Bandhasana, and Shavasana. The prone position asana included were Bhujangasana and Dhanurasana. The breathing exercises for experimental group participants were Bhastrika, Bhramari, Sheetal, sheetkari, Nadisodhana, and Ujjayi Pranayama.

Selection of variables

Independent Variables

- Yogic practices

Dependent Variables

Locomotor skills

- Run
- Gallop
- Hop
- Leap
- Horizontal jump
- Skip
- Slide

Statistical technique: The collected data were analyzed statistically with the Dependent 'test.

Results and Discussion

Table I: Show Experimental group and Control group

Variable	Test	Experimental group		Control group	
		Mean	SD	Mean	SD
Run	Pre-test	0.53	0.50	0.13	0.34
	Post-test	0.63	0.48	0.30	0.46
	T-Test	5.50*		1.46	
Gallop	Pre-test	0.27	0.40	0.23	0.38
	Post-test	0.33	0.47	0.27	0.44
	T-Test	3.29*		1.79	
Hop	Pre-test	0.53	0.50	0.30	0.46
	Post-test	0.70	0.46	0.33	0.47
	T-Test	8.79*		1.94	
Leap	Pre-test	0.23	0.42	0.27	0.40
	Post-test	0.40	0.49	0.30	0.98
	T-Test	8.08*		1.78	
Horizontal jump	Pre-test	0.57	0.50	0.37	0.48
	Post-test	0.47	0.67	0.40	0.49
	T-Test	5.50*		1.87	
Skip	Pre-test	0.30	0.42	0.28	0.16
	Post-test	0.37	0.48	0.31	0.14
	T-test	3.35*		1.79	
slide	Pre-test	0.53	0.50	0.40	0.49
	Post-test	0.60	0.49	0.43	0.50
	T-Test	3.68*		1.85	

*significant at 0.05 level of confidence 't' with 60 is 2.042

The obtained 't' ratio 5.50,3.29,8.79,8.08,5.50,3.35 and 3.68 value of the experimental group is higher than the table value and it is understood that yogic practices significantly improved the performance of locomotor skills, Run, Gallop, Hop, Leap, Horizontal jump, Skip and Slide. However, the control group has no significant improvement as the obtain 't' value is less than the table value; because it was not objected to any specific training.

Conclusions

1. There was a significant improvement in running due to the Yogic practices of school children.
2. There was a significant improvement in gallop due to the Yogic practices of school children.
3. There was a significant improvement in hop due to the Yogic practices of school children.
4. There was a significant improvement in leap due to Yogic practices of school children.
5. There was a significant improvement in horizontal jump due to Yogic practices of school children.
6. There was a significant improvement in skip due to the Yogic practices of school children.
7. There was a significant improvement in slides due to the Yogic practices of school children.
8. Overall, there was a significant improvement in all the selected locomotor skills due to practice among school children.

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