



RESEARCH ARTICLE

EFFECT OF SPECIFIC YOGIC PRACTICES AND SURYANAMASKAR ON EXPLOSIVE POWER VITAL CAPACITY AND ABDOMINAL GRITH AMONG SCHOOL GIRLS

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ABSTRACT

The purpose of the study was to find out the effect of Specific Yogic practices and Suryanamaskar on Explosive power, Vital capacity and Abdominal girth among the School Girls. For this purpose the study one hundred fifty girls student were selected as subjects. Their age ranged between 12 to 14 years. The subjects chosen for the study were randomly divided into three equal groups namely Control Group, Asana, Pranayama with Meditation (Ex.Group-I) and Suryanamaskar, Asana with Meditation (Ex.Group- II) each group consisted of 50 Girls student. Control group III did not involve any training. The duration of training was fixed for 12 weeks. The training package was administered to the two groups. The Asana, Pranayama with Meditation group (Ex.Group-I) included (sitting, standing, prone, and supine position Asanas and Yogic Pranayama like Anulom – Vilom, Nadisodhana, Ujjaiy, Sitkari and Bramari) and Suryanamaskar, Asana with Meditation group (Ex.Group-II) included (12 steps of suryanamaskar and Asanas with Meditation practice). The statistical analysis of covariance (ANCOVA) were used on data collected prior to and after the experimental period. The result shows on Explosive Power, Vital Capacity and Abdominal Girth was greater improvement in the experimental group than the control group.

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INTRODUCTION

SPECIFIC YOGIC PRACTICE: Is an ancient technique of postures (asana), Breathing (Pranayama) Meditation (Self realization) and Suryanamaskar (Sun Salutation) to attain higher level of consciousness. Yoga is derived from the Sanskrit root 'Yuj' means Union, joining, harnessing conduct or connection. Asana is verb as 'Means' to sit 'to remain'. Steady, calm, quite and comfortable asanas are the control of body and purification of our body and mind. Asanas occupies the first place in Hatha yoga from the third part of patanjali in eight limbs of Yoga (Ashtanga yoga), (Dr.Jaysing Malhari Hotkar). Pranayama as breath control the word prana vital energy or lite force, Yama means control. Pranayam improved physical fitness making body clean, strong and healthy. Meditation is self regulation practices such as calm, clarity and concentration Meditation is a process relaxation of body and mind (Dr.H.R.Nagendra)

SURYANAMASKAR: Suryanamaskar is composed of two terms (Surya – the sun god) and namaskar (connection,

Obeisance). Suryanamaskar is a series of 12 physical postures, that variety of forward and backward bends. During suryanamaskar, stretch the spinal column, massage, tone all the joints, muscle and stimulate vital organs of the body. Many benefits occur due to suryanamaskar on school girls for improve, Explosive power, Vital capacity and Abdominal girth (Dr.Kanwaljeeth singh, 2010). This study will be effective to the school children as they are near the teenage group as the life cycle obviously has changed, the mentioned, children should be practice with specific yogic practice and suryanamaskar.

METHODOLOGY

The purpose of the study was to find out the effect of Yogic practices and Suryanamaskar on Explosive power, Vital capacity and abdominal girth among School Girls. For this purpose the study one hundred fifty girls student were selected as subjects. Their age ranged between 12-14 years. The subjects chosen for the study were equated and randomly divided into three equal groups namely Asana, Pranayama with

Meditation (Ex.Group I) and Suryanamaskar, Asana with Meditation (Ex.Group II) and Control Group (Group III) did not involve any training. The duration of training was fixed for 12 weeks 5session per week. The training package was administered to the two groups. The Asana, Pranayama with Meditation group (Ex.Group-I) included (sitting, standing, prone, and supine position Asanas and Yogic Pranayama Anulom – Vilom, Nadisodhana, Ujjaiy, Sitkari and Bramari) and Suryanamaskar, Asana with Meditation group (Ex.Group-II) included (12 steps of suryanamaskar and Asanas with Meditation practice). Data for the selected variables were collected at the prior (pre-test) and at the end of the training period (post-test). Explosive Power (Standing Broad Jump), Vital Capacity (Wet spirometer) and Abdominal Girth (Measuring Inch tape) were selected as variables. Analysis of covariance (ANCOVA) was applied to measure the occurred changes if any due to the influence of combinations of Asana, Pranayama with Meditation and Suryanamaskar, Asana with Meditation training to interpreting the results. All the groups performed their respective training in separate designated areas while the researcher keenly supervised the training programs. Qualified assistants were with the researcher to help in the smooth running of the Practice sessions. All the subjects cooperated well in the training program and there were no instances or injury or serious discomfort during the treatment period.

RESULTS

Table – I indicates the ‘F’ test on Explosive Power. The computed ‘F’ ratio was 41.10. Since the obtained ‘F’ ratio was higher than the required value of 3.06 at 0.05 level of confidence with 2, 147 degree of freedom, it has been found that there is a significant difference among the Experimental group I (Asana, Pranayama with Meditation) and Experimental Group II (Suryanamaskar, Asana with Meditation) on Explosive Power.

Table 1. Analysis of covariance for the pre and post test data on explosive power

	Control group	Ex.Gr.I (APM)	Ex.Gr.II (SAM)	Source of variance	Sum of Squares	Df	Mean squares	‘F’ ratio
Pretest Mean	1.16	1.15	1.14	Between	0.006	2	0.003	2.63
SD	0.03	0.03	0.04	Within	0.178	147	0.001	
Posttest Mean	1.17	1.18	1.19	Between	0.017	2	0.009	6.23*
SD	0.03	0.03	0.04	Within	0.206	147	0.001	
Adjusted Posttest Mean	1.16	1.18	1.20	Between	0.038	2	0.019	41.10*
				Within	0.068	146	0.0005	

*Significant at 0.05 level

Table 2. Analysis of covariance for the pre and post test data on vital capacity

	Control group	Ex.Gr-I (APM)	Ex.Gr-II (SAM)	Source of variance	Sum of Squares	Df	Mean squares	‘F’ ratio
Pretest Mean	2.12	2.12	2.11	Between	0.009	2	0.004	0.500
SD	0.08	0.08	0.10	Within	1.25	147	0.009	
Posttest Mean	2.13	2.22	2.12	Between	0.18	2	0.094	10.61
SD	0.08	0.09	0.10	Within	1.30	147	0.009	
Adjusted Posttest Mean	2.12	2.19	2.13	Between	0.15	2	0.077	60.05
				Within	0.18	146	0.001	

The table value of 3.06 for df 2 and 147 required for significance at .05 level

Table 3. Analysis of covariance for the pre and post test data on abdominal girth

	Control group	Ex.Gr.I (APM)	Ex.Gr.II (SAM)	Source of variance	Sum of Squares	df	Mean squares	‘F’ ratio
Pretest Mean	63.14	62.90	63.62	Between	13.44	2	6.72	0.99
SD	2.60	2.68	2.53	Within	998.30	147	6.79	
Posttest Mean	63.10	56.20	59.58	Between	1190.41	2	595.20	63.55
SD	2.65	3.63	2.80	Within	1376.68	147	9.36	
Adjusted Posttest Mean	63.11	56.26	59.50	Between	1174.41	2	587.20	63.92
				Within	1341.15	146	9.18	

The table value of 3.06 for df 2 and 147 required for significance at .05 level

There is no change in control group. Since the ‘F’ ratio is significant the Post-hoc test of significance is carried out. Table – II indicates the ‘F’ test on Vital Capacity. The computed ‘F’ ratio was 60.05. Since the obtained ‘F’ ratio was higher than the required value of 3.06 at 0.05 level of confidence with 2, 147 degree of freedom, it has been found that there is a significant difference among the Experimental group I (Asana, Pranayama with Meditation) and Experimental Group II (Suryanamaskar, Asana with Meditation) on Vital Capacity. There is no change in control group. Since the ‘F’ ratio is significant the Post-hoc test of significance is carried out. Table – III indicates the ‘F’ test on Abdominal Girth. The computed ‘F’ ratio was 63.92. Since the obtained ‘F’ ratio was higher than the required value of 3.06 at 0.05 level of confidence with 2, 147 degree of freedom, it has been found that there is a significant difference among the Experimental group I (Asana, Pranayama with Meditation) and Experimental Group II (Suryanamaskar, Asana with Meditation) on Abdominal Girth. There is no change in control group. Since the ‘F’ ratio is significant the Post-hoc test of significance is carried out.

DISCUSSION OF FINDING

From the results of the study it was observed that the Ex.Gr.I that underwent the Asana, pranayama with Meditation training (APM) and Ex.Gr.II that underwent the Suryanamaskar, Asana with Meditation (SAM) training where all the 5 session per week and control group was not involve any training. Therefore, the result of the study shows that Explosive power of Asana, Pranayama with Meditation (Ex.Gr.I) and Suryanamaskar, Asana with Meditation (Ex.Gr.II) was significantly improved than the Control group. Hence, compared among the two groups after 12 weeks of the training programme Ex.Gr.II (SAM) was superior followed by Ex.Gr.I (APM) in Explosive power.

The result shows that the Vital Capacity of Asana, Pranayama with Meditation (Ex.Gr.I) and Suryanamaskar, Asana with Meditation (Ex.Gr.II) was significantly improved than the Control group. Hence, compared among the two groups on Vital Capacity, the Ex.Gr.I (APM) was better than the Ex.Gr.II (SAP) in Vital Capacity. The result shows that the Abdominal Girth of Asana, Pranayama with Meditation (Ex.Gr.I) and Suryanamaskar, Asana with Meditation (Ex.Gr.II) was significantly improved than the Control group. Hence, compared among the two groups on Abdominal Girth, the Ex.Gr.I (APM) was greater improvement, followed by Ex.Gr.II (SAP) in Abdominal Girth.

In this study, the school Girls of Ex.Gr.I and Ex.Gr.II had achieved the best performance. This performance ability could be attributed to the training in both the Asana, pranayama with Meditation and Suryanamaskar, Asana with Meditation of Explosive power, Vital capacity and Abdominal girth. Similar results from the studies conducted by some researchers which concluded that Asana, pranayama with Meditation and Suryanamaskar, Asana with Meditation training should be in equal proportion in order to develop the fitness of the students are mentioned below. Murugadasan (2014) was to find out the Phased effect of selected Yogic training on the Physical, Physiological and Anthropometric variables among the school Boys. The study randomly selected 750 school boys the age ranged between 11 to 14 years. They divided into three groups of 250 each. The statistical techniques were used ANOVAs to find out the significant differences among the three groups of Suryanamaskar, Asanas and control group. The results revealed in significant differences between two groups on the selected variables i.e. Explosive Power, Vital Capacity and Abdominal girth. Lohan and Rajesh (2002) studied the effect of asanas and pranayamas on physical and physiological components of boys among age group 12-16 years. One hundred and twenty subjects were equally divided into asana, pranayama, combined and controlled groups. Ten weeks training programme was given to test the Explosive power and vital capacity. Pre test and post test scores were analysed by using ANACOVA. It was concluded that physical and physiological fitness was improved by the training of selected yogic exercise. Ananda Balayogi & Kaviraya Udupa (2011) was conducted this A comparative study of Slow and Fast Suryanamaskar on Physiological Functions. 42 healthy students (21 male and 21 Female) were selected from Govt.HSS Indira Nagar, Puducherry. The subjects age of 13 to 14 years. Subjects were divided in to two groups. FSN group I and SSN group II given training for Suryanamaskar. It was found that FSN had increased vital capacity and power then SSN. On the basis of this study recommended that SN be introduce the School children to improve their Physical fitness.

CONCLUSION

Based on the results obtained, it is learn that both the Asana, Pranayama with Meditation and Suryanamaskar, Asana with Meditation Practice is equally important for obtaining best results of the School Girls students. And the need for specific yogic practice and Suryanamaskar training should not be neglected during the age of 12 to 14 Years.

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