

ISO 9001 - 2015

ISSN 2349 - 4891

Monthly



IF
4.665

Volume 4, Issue 6, June 2017

International Journal of
Recent Research and Applied Studies

SURRAGH PUBLICATIONS
SURRAGH PUBLICATIONS





Combined Effect of Suryanamaskar with Pranayama Practices on Selected School Performance among Asperger Syndrome Children

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Received 26th April 2017, Accepted 5th June 2017

Abstract

The purpose of the present study was to find out combined effect of suryanamaskar with pranayama practices on school performance among asperger syndrome children. The study was conducted on 60 asperger syndrome children. Totally four groups, namely Group I as Suryanamaskar practice group, Group II as Pranayama practice group, Group III as Suryanamaskar with pranayama practice group and Group IV as Control group which did not undergo any type of training. The experimental period of the present study was 12 weeks six days per week. The practice session was only during the morning session (6 AM to 8 AM). The performance at school was measured before and after the experimentation using the standardized questionnaire. The data were analyzed by applying the Analysis of Covariance (ANCOVA) and since four groups were involved in the present study, the Scheffe S test was used as post-hoc test. It was concluded from the results of the study, that the experimental groups (Suryanamaskar with pranayama practice) had significant ($P < 0.05$) effect on the school performance.

Keywords: Suryanamaskar, pranayama, school performance, asperger syndrome.

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Introduction

Yoga gurus from India later introduced yoga to the west, following the success of Swami Vivekananda in the late 19th and early 20th century. In the 1980s, yoga became popular as a system of physical exercise across the Western world. Yoga in Indian traditions, however, is more than physical exercise; it has a meditative and spiritual core. One of the six major orthodox schools of Hinduism is also called Yoga, which has its own epistemology and metaphysics, and is closely related to Hindu Samkhya philosophy. (Mikel Burley, 2012). Many studies have tried to determine the effectiveness of yoga as a complementary intervention for cancer, schizophrenia, asthma, and heart disease. The results of these studies have been mixed and inconclusive, with cancer studies suggesting none to unclear effectiveness, and others suggesting yoga may reduce risk factors and aid in a patient's psychological healing process. (Smith et.al, 2009)

Asperger's syndrome is considered to be a high functioning form of autism. People suffering from this disorder usually have difficulty in interacting socially, engage in repetitive behaviors, may be clumsy and have delayed motor milestones. Symptoms of the syndrome normally come to light within the first few months of a

child's life. By the age of three the disorder is quite obvious in those suffering from it. Parents should make sure to give balanced nutritional diet to their children. Child should be on a healthy balanced diet, and that they are also getting enough physical exercise. There is no single best treatment for all children suffering from Asperger's syndrome. The psycho physical form of practice will be the best remedy on solution for the asperger syndrome. Yoga is the only traditional of therapy accepted by the WHO. This is the very reason for choosing this topic for research.

Statement of the Problem

The purpose of the present study was to find out the isolated and combined effect of suryanamaskar with pranayama practices on selected school performance among asperger syndrome children.

Methodology

The purpose of the study was to find out the combined effect of suryanamaskar with pranayama practices on selected school performance among asperger syndrome children. For the purpose of this study, sixty asperger syndrome children were chosen on random basis from Chennai city only. Their age group ranges from 8 to 12 years. The subjects were divided into four group of fifteen each. The Group I underwent suryanamaskar, Group II underwent pranayama practice, Group III – underwent combined Suryanamaskar with pranayama practice and Group IV acted as control group,

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which did not undergo any training apart from their regular academic studies, and the pre test and post tests were conducted before and after the practices. The training was given for 12 weeks, six days per week. To estimate the school performance, a standard asperger questionnaire was used. The collected data were statistically analyzed by using analysis of covariance

(ANCOVA).

Results and Discussions

The statistical analysis comparing initial and final means of school performance due to Suryanamaskar with pranayama among asperger syndrome children is presented in Table I.

Table 1

Computation of analysis of covariance on school performance of experimental and control groups (Scores in numbers)

Variable Name	Group Name	Suryanamaskar Practice Group	Pranayama Practice Group	Combined Practice Group	Control Group	'F' Ratio
School Performance	Pre-test Mean \pm S.D	22.66 \pm 1.12	23.13 \pm 0.86	23.06 \pm 0.99	22.8 \pm 1.10	0.05
	Post-test Mean \pm S.D.	28.06 \pm 1.97	28.06 \pm 1.18	34.73 \pm 1.82	23.06 \pm 1.08	31.97*
	Adj. Post-test Mean \pm S.D.	28.63	28.09	34.74	23.05	32.02*

* Significant at 0.05 level of confidence. Table value required for significant at .05 level of confidence for 3 and 56 was 2.77 and 3 and 55 was 2.78.

The analysis of co-variance of school performance indicated that suryanamaskar practice group, pranayama practice group, suryanamaskar with pranayama practice group control group were significantly differ on school performance. The findings of the study also showed that the suryanamaskar with pranayama practice group had improved the school performance. We can use Suryanamaskar with pranayama not only as part of a program to improve (increase) school performance, but also as a way to assist in attaining other goals. Hence, taking into consideration

of the pre test means, post test means and adjusted post test means were determined and analysis of covariance was done and the obtained F value 27.91 was greater than the required value of 2.78 and hence it was accepted that the Suryanamaskar with pranayama significantly improved the school performance among asperger syndrome children. Since significant improvement was recorded for the experimental groups, the results were subjected to post hoc analysis using Scheffe's post-hoc test. The results were presented in Table 2.

Table 2

Scheffe's test for the differences between the adjusted post – test means of school performance (scores in numbers)

Suryanamaskar Practice Group	Pranayama practice group	Combined Practice Group	Control Group IV	Mean difference	Required C.I
28.64	-	-	23.06	5.58*	2.65
-	28.09	-	23.06	5.03*	2.65
-	-	34.75	23.06	11.69*	2.65
28.64	28.09	-	-	0.55	2.65
28.64	-	34.75	-	6.11*	2.65
-	28.09	34.75	-	6.66*	2.65

* Significant at .05 level

Table 2 shows that the Scheffe's Test for the difference between adjusted post-test mean of suryanamaskar practice group and control groups was 5.58, pranayama practice group and control group was

5.03, combined practice of suryanamaskar and pranayama practice group and control group was 11.69, suryanamaskar and suryanamaskar and pranayama practice group was 6.11 and pranayama

practice group and suryanamaskar and prayanayama practice group was 6.66 which were significant at .05 level of confidence. And there was no significant difference between suryanamaskar practice group and pranayama practice group on school performance (0.55).

Conclusions

Based on the results of the study, the following conclusion were drawn:

1. Participation in suryanamaskar and pranayama practice resulted in a significant rise in school performance level on experimental groups when compared with control group.
2. The combined practice group showed significant improvement in school performance level as compared to suryanamaskar practice group, pranayama practice group and control group. The results of the study also shown that there was no significant difference in school performance level between the suryanamaskar group and pranayama practice group.

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