



ISSN Print: 2664-7281
ISSN Online: 2664-729X
Impact Factor: RJIF 8
IJSEPE 2024; 6(2): 247-250
www.sportsjournals.net
Received: 23-07-2024
Accepted: 02-09-2024

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Effect of hatha yogic practices with and without Suryanamaskar on psychological variables of urban school throw ball players

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DOI: <https://doi.org/10.33545/26647281.2024.v6.i2d.134>

Abstract

The purpose of this study was to find out the effect of hatha yogic practices with and without suryanamaskar on psychological variables of urban school throw ball players. To achieve this purpose sixty urban school throw ball players, from Government higher secondary school Ganapathi, Corporation higher secondary school, Rathinapuri, S E Smetric higher secondary school Ganapathi, Tamil Nadu, India. The subjects were selected by zonal level throw ball player's age group from 12 to 15 years. The subject were divided into three Equal groups each group namely hatha yoga group, hatha yoga with suryanamaskar group and control group. Underwent training programme for the period of twelve weeks, and control group has not under gone any type of training. Investigator selected psychological variables were span of attention the data were collected before and after the training programme. The selected data was statistically analyzed by using analysis of co-variance (ANCOVA). The result of the study reveals the hatha yoga with suryanamaskar training group was better than the hatha yoga group psychological variables.

Keywords: Hatha yoga, suryanamaskar, psychological variables, span of attention

Introduction

- **Hatha yoga:** The word "hatha" is a combination of the words "ha" which means "vital life force" and "tha" which means "mental force". The traditional meaning of "yoga" is union. Hatha yoga is great for beginners who are interested in giving yoga a try.
- **Suryanamaskar:** "The literal meaning of Suryanamaskar is salutation to the sun. Suryanamaskar consists of 12 different postures and is done along with chanting of mantras in every posture. Suryanamaskar is traditionally performed on empty stomach at sunrise which is considered the most spiritually favorable time and facing the rising sun. (Anamika, 2013).
- **Psychology:** Psychology is the study of human behavior and human relationship (Robert, 1996).
- **Span of attention:** The ability to focus attention on a task is crucial for the achievement of one's goals (Cornish, David, Dianne Dukette, 2009).
- **Statement of the problem:** The Present study was to find out the effect of hatha yoga practices with and without suryanamaskar on psychological variables of urban school throw ball players.

Methodology

Selection of subjects

The purpose of the study was to find out the effect of hatha yogic practices with and without suryanamaskar on psychological variables of urban school throw ball players. To achieve this study, sixty urban school throw ball players were selected from Government higher secondary school Ganapathi, Corporation higher secondary school, Rathinapuri, S E Smetric higher secondary school Ganapathi, Tamil Nadu, India. The age of the subject was ranged from 12 to 15 years as per the school records. The selected subjects were divided into three groups. Each group consisted of 20 subjects. Group I named as Hatha Yoga Group, Group II named as Hatha Yoga with Suryanamaskar Group and Group III served as Control Group. .

The experimental groups underwent hatha yoga group and hatha yoga with suryanamaskar group, twelve weeks training, 3 days per week, for 1 hour per day and control group was not involves any specific training. The psychological variables were used for this study span of attention. pretest and posttest were conducted before and training programme respectively.

Table 1: Selection of the tests

Variables	Test items	Units
Span of Attention	Tachistoscope	Points

Training Programme: The training in the hatha yoga group and hatha yoga with suryanamaskar group was given to the group for a period of twelve weeks as follows

Training periods: 12 weeks

Training sessions: 3 days per week

Duration of the session: 1 hour

Table 2: Significance of mean gains / losses between pretest and posttest of hatha yoga practices group hatha yoga With suryanamaskar practices group and Controlgroup on span of attention

S. No	Group	Pretest Mean (±SD)	Posttest Mean (±SD)	MD	SE	't' ratio
1	Hatha Yoga Practices Group	3.35 (1.34)	5.45 (1.05)	2.10	0.25	8.40*
2	Hatha Yoga with Suryanamaskar Practices Group	3.35 (1.04)	6.20 (1.06)	2.85	0.22	12.95*
3	Control group	3.20 (1.58)	3.40 (1.14)	0.20	0.24	0.83

*Significance at 0.05 level (table value with df19 - 2.09)

Table II shows that the pretest and posttest mean value of hatha yoga practices group on span of attention is 3.35 and 5.45 respectively. The obtained 't' value of hatha yoga practices group on span of attention is 8.40 which is greater than the required table value of 2.09. Hence it is proved that there is a significant difference between the pretest and posttest of hatha yoga practices group on span of attention.

The pretest and posttest mean value of hatha yoga with suryanamaskar practices group on span of attention is 3.35 and 6.20 respectively. The obtained 't' value of hatha yoga with suryanamaskar practices group on span of attention is 12.95 which is greater than the required table value of 2.09. Hence it is proved that there is a significant difference between the pretest and posttest of hatha yoga with suryanamaskar practices group on span of attention.

The pretest and posttest mean value of control group on span of attention is 3.20 and 3.40 respectively. The obtained 't' value of control group on span of attention is 0.83 which is lesser than the required table value of 2.09. Hence it was proved that there is an insignificant difference between the pretest and posttest of control group on span of attention.

The mean value of pretest and posttest on span of attention of hatha yoga practices group and hatha yoga with suryanamaskar practices group and control group are graphically represented in figure-1.

Statistical procedure

The data collected from the three groups before and after the experimental period were statistically examined by the investigator used paired 't' test to find out the deference between pretest and posttest and analysis of covariance (ANCOVA). Whenever the 'F' ratio was found to be significant, Scheffe's test was used as post- hoc test to determine which of the paired means differed significantly. In all cases the criterion for statistical significance was set at 0.05 level of confidence ($p < 0.05$). All the statistical analysis was accepted with the help of SPSS 16 version.

Span of attention

The obtained data on span of attention of the hatha yoga practices group, hatha yoga with suryanamaskar practices group and control group have been analyzed and the results are presented in table -2.

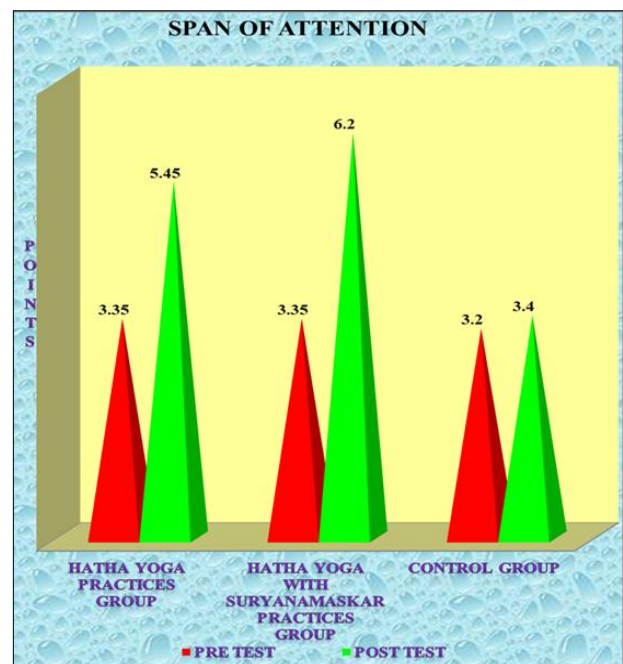


Fig 1: Bar diagram showing the pretest and posttest mean value of hatha yoga practices group hatha yoga with suryanamaskar practices group and control Group on span of attention

Table 3: Analysis of covariance of hatha yoga practices group Hatha yoga with suryanamaskar practices group And control group on span of attention

Test	Hatha Yoga Practices Group	Hatha Yoga with Suryanamaskar Practices Group	Control Group	Source of Variances	Sum of Squares	Df	Mean Squares	'F' Ratio
Pre-Test Mean	3.35	3.35	3.20	Between	0.30	2	0.15	0.08
SD	1.34	1.04	1.58	Within	102.30	57	1.79	
Post Test Mean	5.45	6.20	3.40	Between	84.03	2	42.02	35.61*
SD	1.05	1.06	1.14	Within	66.95	57	1.18	
Adjusted Post Test Mean	5.42	6.17	3.45	Between	78.89	2	39.44	55.54*
				Within	39.65	56	0.71	

*Significant at 0.05 level. Table value at 0.05 level of confidence for 2 & 57 and 2 & 56 degree of freedom = 3.15 & 3.16

Table III shows that the pretest mean value of hatha yoga practices group, hatha yoga with suryanamaskar practices group and control group on span of attention are 3.35, 3.35 and 3.20 respectively. The obtained 'F' ratio value for pretest mean of hatha yoga practices group, hatha yoga with suryanamaskar practices group and control group on span of attention is 0.08 which is less than the required table value of 3.15 for significance with df 2 and 57 at 0.05 level of confidence. It is proved that all the three groups were randomly equal.

The posttest mean value of hatha yoga practices group, hatha yoga with suryanamaskar practices group and control group on span of attention are 5.45, 6.20 and 3.40 respectively. The obtained 'F' ratio value for post test mean of hatha yoga practices group, hatha yoga with suryanamaskar practices group and control group on span of attention is 35.66 which was greater than the required table

value of 3.15 for significance with df 2 and 57 at 0.05 level of confidence.

The adjusted posttest mean value of hatha yoga practices group, hatha yoga with suryanamaskar practices group and control group on span of attention are 5.42, 6.17 and 3.45 respectively. The obtained 'F' ratio value for adjusted post test mean of hatha yoga practices group, hatha yoga with suryanamaskar practices group and control group on span of attention is 55.54 which was higher than the required table value of 3.16 for significance with df 2 and 56 at 0.05 level of confidence.

The above statistical analysis proved that there was a significant difference among the groups on span of attention due to the training programme. Further to determine which of the paired means has a significant difference, the Scheffe's post hoc test has been applied. The result of the follow-up test was presented in table 4.

Table 4: Scheffe's post hoc test for the difference between adjusted mean differences among the three Groups on span of attention

S. No.	Adjusted Post-test Means			Mean Difference	Confidence Interval
	Hatha Yoga Practices Group	Hatha Yoga with Suryanamaskar Practices Group	Control Group		
1.	5.42	6.17	-	0.75*	0.68
2.	5.42	-	3.45	1.97*	
3.	-	6.17	3.45	2.72*	

*Significant at 0.05 level of confidence.

Table-IV shows that the adjusted posttest mean difference on span of attention between hatha yoga practices group and hatha yoga with suryanamaskar practices group, hatha yoga practices group and control group, hatha yoga with suryanamaskar practices group and control group are 0.75, 1.97 and 2.72 respectively, which is greater than the confidence interval value of 0.68 at 0.05 level of confidence. The result of the above table indicates that the hatha yoga practices group and hatha yoga with suryanamaskar

practices group had significantly improved on span of attention when compared with the control group. Hatha yoga with suryanamaskar practices group is better than the hatha yoga practices group on span of attention.

The mean value of pre test, post test and adjusted post test on span of attention. ofhatha yoga practices group,hatha yoga with suryanamaskar practices group and control group have been graphically represented in figure-2.

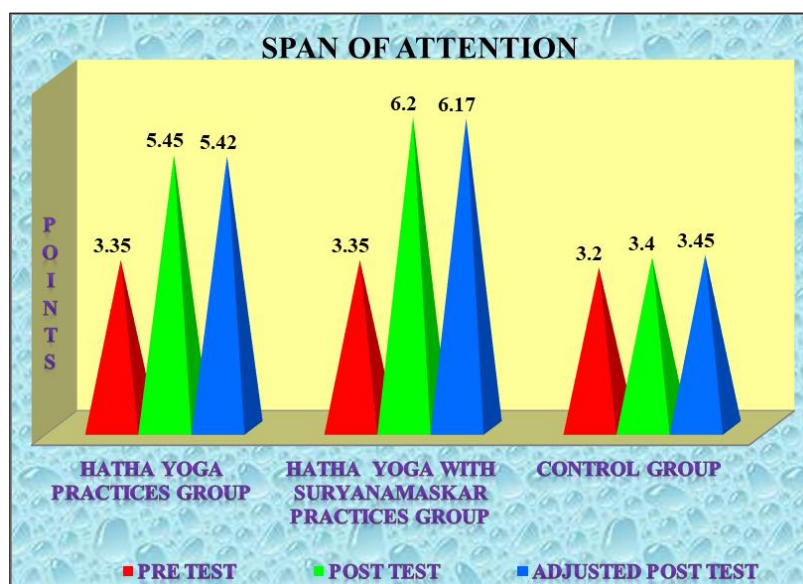


Fig 2: Bar diagram showing the pretest posttest and adjusted posttest mean value of hatha yoga practices group hatha yoga with suryanamaskar practices group and control group on span of attention

Discussion on findings

The purpose of the study was to find out the effect of hatha yogic practices with and without suryanamaskar on body psychological variables of urban school throw ball players.

Span of attention

The results of the study reveal that there is a significant difference between pre test and post test of hatha yoga practices group, hatha yoga with suryanamaskar practices

group on span of attention. There is an insignificant difference between pre test and post test of control group on span of attention.

Regarding analysis of covariance, it was observed that there is a significant difference among hatha yoga practices group, hatha yoga with suryanamaskar practices group and control group on span of attention.

It was concluded that the hatha yoga practices group and hatha yoga with suryanamaskar practices group is better than the control group on span of attention due to the respective training programme. Hatha yoga with suryanamaskar practices group is better than the hatha yoga practices group on span of attention.

Azamith and Paul Kumar (2014) & Abhilashand Gopinathan (2014) proved that effects of yogic practices had significantly improved on psychological variables among school students.

Conclusions

It was concluded that the hatha yoga practices group and hatha yoga with suryanamaskar practices group is better than the control group on span of attention because of the respective training programme. Hence the hatha yoga with suryanamaskar practices group is better than the hatha yoga practices group on span of attention.

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