



IMPACT OF KALARI TRAINING ON PSYCHOMOTOR VARIABLES OF UNIVERSITY LEVEL VOLLEYBALL PLAYERS

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ABSTRACT

The purpose of the study is to find out the impact of Kalari training on psychomotor variables of University level male volleyball players. To achieve the purpose of this study 30 volleyball players as a subjects from Ramakrishna Mission Vivekananda Educational and Research Institute and Karpakam University Coimbatore, Tamil Nadu India. At Random group design was used in this experimental study. Thirty subjects were selected from the age group of 18-25 years. In each category 15 was experimental group (RKMVERI) and 15 was Control group (KU). Pretest was conducted in all the selected variables and post test was conducted after 12 weeks kalarit training. Pre and post tests were also be conducted in the psychomotor variables namely; Reaction time and Coordination as testing with standardized tools as visual reaction timer, mirror trashing apparatus and digital stop watch. The data was collected before and after the training programmes and statistically analyzed by using dependent 't' test. These results illustrate how to develop the psychomotor variables while providing Kalari training for the volleyball players.

KEYWORDS: Kalari Training, Psychomotor Variables, Volleyball.

INTRODUCTION

The Kalaripayattu of India is one of the most ancient martial art forms in the world. Through it's very scientific physical discipline, it opens up the practitioner energy channels and pushes the boundaries of the body to become strong, flexible and focused physically, mentally and spiritually; the reason why theatre and dance artists practice it as a daily discipline. As an ancient martial art form, Kalaripayattu draws on the vocabulary of nature and its movements. Its techniques are a combination of steps (chuvadu) and postures (vadivu). The postures are named after animals, and inspired by observation of their stances. Kalaripayattu remains closely connected to yoga, dance and performing arts. (www.kalarigram.org).

METHODOLOGY

The purpose of the study is to find out the impacts of Kalari training on psychomotor variables of University level male volleyball players. The experimental group underwent Kalari training for twelve weeks 5 days per week for 60 minute per day. The control group was not given any specific training programme. The experimental design used is pre test and post test randomized group design. Psychomotor variables were assessed by using reaction timer test and mirror trashing test.

SELECTION OF SUBJECTS

To achieve this purpose a total number of thirty University level volleyball players in the age group of 18 – 25 years were randomly selected from Ramakrishna

Mission Vivekananda Educational and Research Institute and Karpakam University Coimbatore, Tamil Nadu India. Among the selected subjects, 15 were experimental group and 15 were control group.

SELECTION OF VARIABLES

The following variables were selected and the data were collected using the appropriate tools.

S. N O	VARIABLE S	TEST	UNIT OF MEASURES
PSYCHOMOTOR VARIABLES			
1	Reaction time	Visual Reaction Timer	In 10/100
2	Hand Eye Coordination	Mirror tracing Apparatus	No of Error

EXPERIMENTAL DESIGN

The study was formulated using random group design. Thirty subjects were randomly selected from Ramakrishna Mission Vivekananda Educational and Research Institute and Karpakam University Coimbatore, Tamil Nadu India. Pre test was conducted in the selected Psychomotor variables. After a period of twelve weeks of specific training, post-test was conducted using the following tests.

- Reaction time
- Hand Eye Coordination

TRAINING

The training in the kalariactivities was given to the experimental groups(RKMVERI) for a period of 12 weeks as follows:

- **Training period:** 12 weeks
- **Training sessions:** 5 days per week
- **Duration of one session:** 60 minutes

Post tests were conducted for both the groups in all the selected variables as in the pre tests.

STATISTICAL TECHNIQUE

The collected data were analyzed using t ratio to find out the significant improvement in the selected psychomotor variables by both the groups. It was considered as the most appropriate statistical technique for the study.

RESULTS AND DISCUSSION OF 't' RATIO

The results of the significant difference between the pre tests and post tests were analyzed using t ratio and the results are presented.

TABLE-I
SIGNIFICANCE OF MEAN GAINS /LOSSES BETWEEN PRE AND POST TEST OF EXPERIMENTAL GROUP ON PSYCHOMOTOR VARIABLES

Variables	Pre mean ±S.D	Pre mean ±S.D	Mean. Diff	Std. Error	DF	't' ratio
Reaction Time	0.34 ±0.03	0.29 ±0.02	0.50	0.00	14	11.29*
Hand Eye Coordination	17.67 ±3.79	12.73 ±3.61	4.93	0.56	14	8.75*

**Significant at 0.05 level*

Table-I indicates that the obtained 't' ratios for psychomotor variables are: 11.29 (Reaction time) and 8.75 (Hand Eye Coordination). The obtained 't' ratios on all the variables are greater than the table value of 2.14 for degrees of freedom 14. It is observed that the mean gains and losses made from pre and post-test are

statistically significant. A twelve weeks practice of Kalari training produced significant improvement from the performance of baseline. Graphical representation of pre-test and post-test means of psychomotor variables of experimental group on Reaction Time and Hand Eye Coordination are presented in figure-1.

FIGURE – 1

BAR DIAGRAM SHOWING PRE AND POST TEST MEANS OF EXPERIMENTAL GROUP ON PSYCHOMOTOR VARIABLES

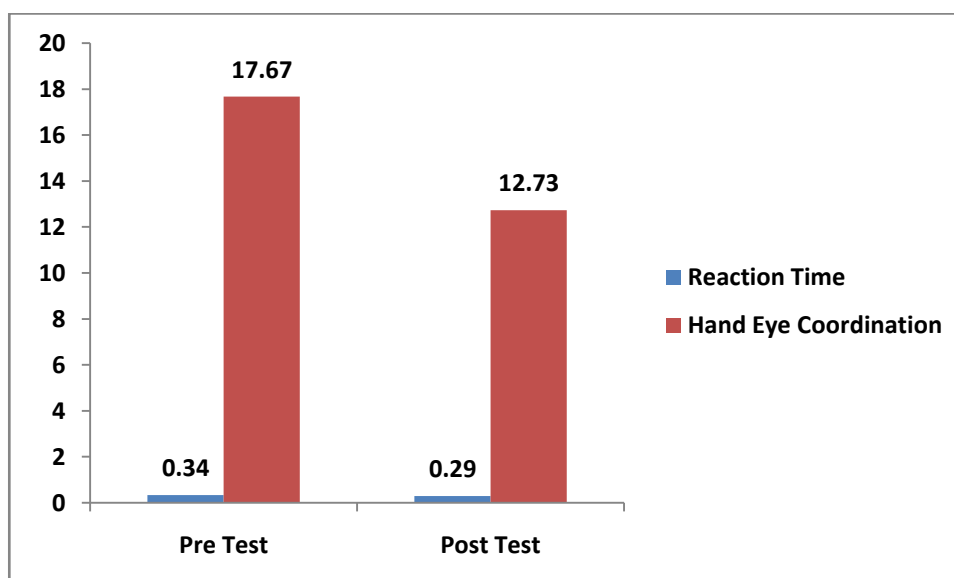


TABLE-II
SIGNIFICANCE OF MEAN GAINS /LOSSES BETWEEN PRE AND POST TEST OF CONTROLGROUP ON
PSYCHOMOTOR AND PSYCHOMOTOR VARIABLES

Variables	Pre mean ±S.D	Pre mean ±S.D	Mean. Diff	Std. Error	DF	't' ratio
Reaction Time	0.32 ±0.03	0.32 ±0.02	0.01	0.00	14	1.52
Hand Eye coordination	20.60 ±2.35	20.33 ±1.67	0.27	0.37	14	1.07

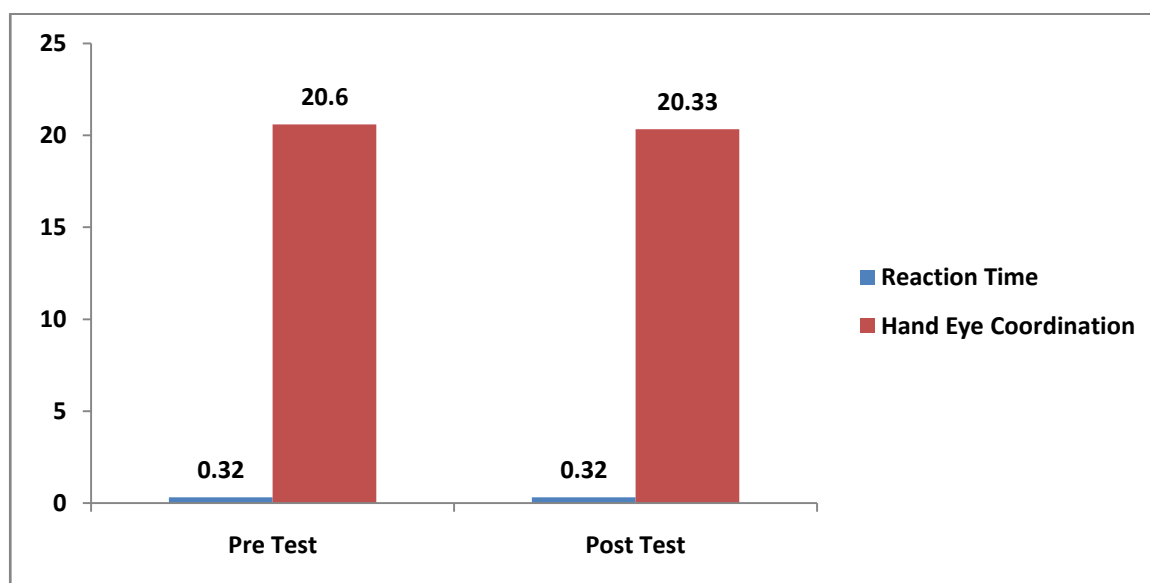
**Significant at 0.05 level*

Table-II indicates that the obtained 't' ratios for psychomotor variables are: 1.52 (Reaction time) and 1.07 (Hand Eye Coordination). The obtained 't' ratios on all the variables are greater than the table value of 2.14 for degrees of freedom 14. It is observed that the mean

gains and losses made from pre and post-test are statistically insignificant. Graphical representation of pre-test and post-test means of psychomotor variables of control group on Reaction Time and Hand Eye Coordination are presented in figure 2.

FIGURE – 2

BAR DIAGRAM SHOWING PRE AND POST TEST MEANS OF CONTROL GROUP ON PSYCHOMOTOR VARIABLES



DISCUSSION ON FINDINGS OF PSYCHOMOTOR VARIABLES

The result of the study had revealed that there is significant difference in psychomotor variables of the experimental group from pre test to post test.

1. The result of the study had revealed that there is no significant difference in psychomotor variables of the control group from pre test to post test.
2. The results also reveal that the experimental group had significantly improved psychomotor variables. Whereas the control group showed no significant improvement on psychomotor variables.

3. The results were supported with the results of the study conducted by *Kotzamanidis (2007)&Jeffrey J(1988)*. In which physical activities had improved Psychomotor variables.

CONCLUSIONS

1. There was a significant improvement on Psychomotor variables between pre and post – tests of the experimental group as a result of 12 weeks of Kalari training programme.

REFERENCE

1. Luijendijk, D.H. (2008) Kalarippayat: The Essence and Structure of an Indian Martial Art, Oprat, ISBN 978-1-4092-2626-0
2. Sport Across Asia: Politics, Cultures, and Identities, Katrin Bromber, Birgit Krawietz, Joseph Maguire. 2013, pp137
3. "Plyometric - History, Indian Gymnastic Pole, Information In English". Mumbai, India. 12 September 2018.
4. Deepti Joshi., Analysis of psychomotor abilities as predictive factor for female long jumpers., International Journal of Physical Education, Sports and Health 2016; 3(3): 479-481; P-ISSN: 2394-1685
5. Andreeva AM, FiziolCheloveka., Akimov EB. Clusters structure of psychomotor and coordination sphere of primary school children. 2011 Jul-Aug;37(4):44-54. 21950086.
6. Chaouachi, A., Manzi, V., Wong del, P., Chaalali, A., Laurencelle, L., Chamari, K., & Castagna, C. (2006). Changes in skill and Psychomotor following training in talent-identified volleyball players. J Strength Cond Res, 20:1, p-29-35.
7. Jeffrey J. McHenry, Sharon R. RoseSteve Skaggs, Chris Hopper Literature Review: Validity and Potential Usefulness of Psychomotor Ability Tests for Personnel Selection and Classification, 1988 - 254 pages
8. Gabbett, T., Georgieff, B., Anderson, S., Cotton, B., Savovic, D., & Nicholson, L. (2011). Impacts of training frequency on Psychomotor in male prepubertal tennis players. J Sports Med Phys Fitness, 51:3, p-409-16.
9. Jeffrey J. McHenry, Sharon R. RoseSteve Skaggs, Chris Hopper Literature Review: Validity and Potential Usefulness of Psychomotor Ability Tests for Personnel Selection and Classification, 1988 - 254 pages
10. Kotzamanidis, C., Chatzopoulos, D., Michailidis, C., Papaiakevou, G., & Patikas, D. (2007). Relationship between Psychomotor and playing ability in rugby league players. J Strength Cond Res, 21:4, p-1126-33.
11. Andreeva AM, FiziolCheloveka., Akimov EB. Clusters structure of psychomotor and coordination sphere of primary school children. 2011 Jul-Aug;37(4):44-54. 21950086.