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# MODERN PERSPECTIVES OF SPORTS SCIENCE AND YOGA FOR THE ENHANCEMENT OF SPORTS PERFORMANCE

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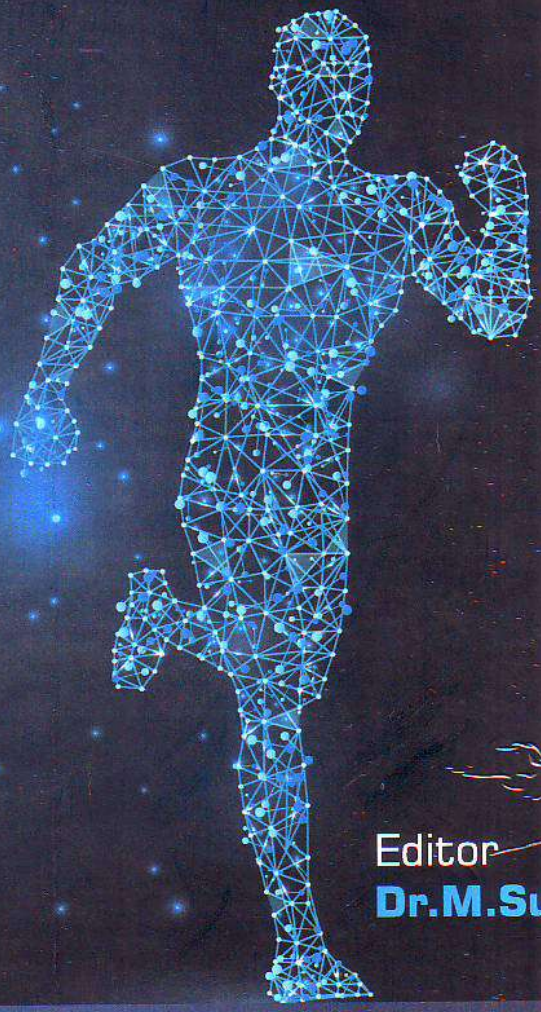

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# Proceedings


Editor

**Dr.M.Suresh Kumar**

**Research Department of Physical Education**
**Ganesar College of Arts and Science**
Melasivapuri, Ponnamaravathi, Pudukkottai– 622 403,
Tamil Nadu, India.
Website: www.ganesarcollege.edu.in
Email: ganesarcollege1909@gmail.com
Ph: 04333-247603

# ANALYSIS OF SELECTED PSYCHOMOTOR AND PSYCHOLOGICAL VARIABLES AMONG WOMEN BASKETBALL PLAYERS

**SANGEETHA. K[1] & Dr.K.KANNADASAN[2]**

*[1]Ph.D. Research scholar Tamil Nadu Physical Education and Sports University, Chennai, India*
*[2]Assistant Professor, Department of Sports Psychology and Sociology, Tamil Nadu Physical Education and Sports University, Chennai, India*

**Abstract:**

*The study was conducted to analyze the selected Psychomotor and psychological variables among women basketball players of different age group. To achieve the purpose of the study, a total of forty-five (N=45) basketball players were selected as subjects according to the required age category. The three age groups namely Group I (16-20yrs), Group II (21-25yrs) and Group III (26-30yrs). Each group consists of fifteen (n=15) basketball players selected at random from schools, colleges and professional teams of Kerala. The psychomotor variables such as speed and agility, the psychological variable namely locus of control were selected as variables of this study. To assess the psychomotor variables, speed was measured by applying a standard test of 50 yards dash and Shuttle Run was used to measure agility of the Basketball Players (Johnson, Barry and Nelson, Jack K.1988). To assess the psychological variable locus of control Rotter's I-E Locus of control questionnaire was used. To determine the significant differences analysis of variance (ANOVA) was used and the level of significance was tested at 0.05. From the results of the study it was proved that there was a significant difference found in psychomotor variables namely speed and agility, psychological variable namely locus of control among different age group of women Basketball players.*

**Key words:** *Psychomotor, Speed, Agility and locus of control.*

## INTRODUCTION

The notion of optimal physical and motor development (psychomotor) has to be understood by the parents and the sports specialists concerned. Psychomotor variables act as the medium for the realization of cognitive and affective domains of learning and motor behavior. All these domains of learning are inseparable identities and work in perfect harmony and unison with one another. The psychomotor variables are primarily concerned with muscular contraction. Performance of motor skills involves neural, physiological and psychological aspects and is a continuum that runs the gamut from physical to cognitive and there is always integration between these aspects of human behavior (Harold, Barrow & McGee, 1979). Psychomotor movement is a complex quality and is influenced by the physical performance factors which underlie the action of all movements. These factors comprise speed, power, strength, reaction time, and speed of movement, agility, flexibility, balance, kinesthetic perception, coordinative abilities and the like. This Introduction 6 psychomotor movement can be restricted or enhanced by certain structural factors encompassing height, weight, body type, structure and posture. These physical performance factors are effective in the enhancement of psychomotor performance of the sportspersons (Phillips & Hornak, 1979).

Locus of Control is a psychological, social learning theory that refers to the extent to which individuals perceive control over their lives, and environment (Lefcourt, 1976). Locus of control has been applied to many other interpersonal and intrapsychic areas such as seeking information, taking political action defensive externality and attribution respectively. There has been various controversies surrounding locus of control regardless of its appeal and explanatory nature. One among them is regarding the content validity of the way in which the phenomena is operationally defined. (Rotter 1975). There has been diverse and multitudes when it comes to the definition of Locus of control, generally it stand for the belief weather rewards are the result of one's own actions and divisions or, a product of some internal entity or force. This brings us to the concept of internal and external locus of control. Internal locus of control is the belief that reinforces ones physical efforts decides ones victory and intern improve physical and mutual health. The thought that victory and achievements are result of sheer hard work and dedication reinforces this ideology. On the other hand, an internal locus of control depends rewards as result of some unknown, yet present internal for such as luck, fate or actions of powerful other individuals. External locus of control leads to dysfunctional behavior, psychological distress and poor mental and physical health, extreme situations leads to depression and anxiety disorders.

## REVIEW OF RELATED LITERATURE

*Amarpreet Singh (2015)* analyzed a study to determine the body composition and psychomotor variables between under-19 schools and inter college basketball players. 100 Basketball players were selected as subjects (50 under-19 school players and 50 inter college players). The age of subjects ranged between 17 to 25 years. Body composition variables (body fat% & visceral fat) and psychomotor variables (speed & agility) were selected for this study. Body composition monitor with scale HBF- 361 was used to measure body fat% and visceral fat and stop watches, track, marking powder, measuring tape, two wooden blocks were used for measuring speed & agility. The results showed that there were significant differences between both the groups i.e. under-19 school and inter college basketball players for their body composition and psychomotor variables.

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*Binu George Varghese and Diya Varghese (2015)* investigated a study on the locus of control and athletic identity among the national level basketball players. The data for the study comprised of 381 national and state level basketball players between the age group of 15 to 35 participated in youth junior and senior national championship between 2011 to 2014. To achieve the purpose of the study 157 no. of boys 224 no. of girls whole heartedly participated during their participation in national championship approved by basketball federation of India. The average age of the students were under 16 in youth, under 18 in junior, and above in senior. The data for this study collected from the sample with the locus of control scale (LOC; Rotter, 1996)( to assess internal and external locus of control) and Athletic identity measurements scale (AIMS) (to assess athletic identity) (Brewer,Van Rallte&Linder,1993)It was hypothesized that Male basketball players will have a better locus of control than the female basketball players and there will be gender difference in terms of athletic identity among the basketball players. The data pertaining to the locus of control and athletic identity was tested using multivariate Analysis of Variance (MANOVA) and Analysis of variance (ANOVA) for analyzing the differences exist between grouping variables. The ANOVA results reveals that the dependent variables athletic identity found significant differ between groups viz.; youth, junior and senior and No significant difference were found between gender and group (youth, junior and senior) of Basketball players on locus of control.

## STATEMENT OF THE PROBLEM

The purpose of the present study was to compare the selected Psychomotor and psychological variables among women basketball players of different age group.

## METHODS

The purpose of the present study was to compare the selected psychomotor and psychological variables among women basketball players of different age group. To achieve the purpose of the study, a total of forty-five (N=45) basketball players were selected as subjects according to the required age category. The three age groups namely Group I (16-20yrs), Group II (21-25yrs) and Group III (26-30yrs). Each group consists of fifteen (n=15) basketball players selected at random from schools, colleges and professional teams of Kerala. The psychomotor variables such as speed and agility, the psychological variable namely locus of control were selected as variables of this study. To assess the psychomotor variables, speed was measured by applying a standard test of 50 yards dash and Shuttle Run was used to measure agility of the Basketball Players (Johnson, Barry and Nelson, Jack K.1988). To assess the psychological variable locus of control Rotter's I-E Locus of control questionnaire was used.

## ANALYSIS OF DATA

The data collected from the basketball players on selected criterion variables were statistically examined by using analysis of variance (ANOVA) to determine the difference in selected psychomotor and psychological variables among different age group of Basketball players. The level of significance was tested at 0.05 level and the suitable follow-up test was used to find out the paired means significant difference.

**TABLE I**

**DESCRIPTIVE STATISTICS FOR SELECTED PSYCHOMOTOR AND PSYCHOLOGICAL VARIABLES AMONG WOMEN BASKETBALL PLAYERS**

| S.No | Variables | Group I (16-20yrs) | | Group II (21-25yrs) | | Group III (26-30yrs) | |
|---|---|---|---|---|---|---|---|
| | | Mean | SD(±) | Mean | SD(±) | Mean | SD(±) |
| 1 | Speed | 7.98 | 0.52 | 7.71 | 0.47 | 8.11 | 0.69 |
| 2 | Agility | 10.84 | 0.46 | 10.02 | 0.39 | 11.39 | 0.73 |
| 3 | Locus of Control | 11.80 | 1.82 | 13.33 | 1.34 | 11.26 | 2.25 |

Table - I show the mean and standard deviation values of the different age group of women basketball players on the selected criterion variables namely Speed, agility, and locus of control.

**TABLE I (A)**

**ANALYSIS OF VARIANCE FOR SELECTED PSYCHOMOTOR AND PSYCHOLOGICAL VARIABLES AMONG WOMEN BASKETBALL PLAYERS**

| Variables | Source | Sum of Squares | df | Mean Square | F |
|---|---|---|---|---|---|
| Speed | Between Groups | 3.41 | 2 | 1.71 | 5.59* |
| | Within Groups | 12.80 | 42 | 0.30 | |
| Agility | Between Groups | 14.29 | 2 | 7.14 | 23.51* |
| | Within Groups | 12.76 | 42 | 0.30 | |

| | | | | | |
|---|---|---|---|---|---|
| Locus of Control | Between Groups | 34.53 | 2 | 17.26 | 5.08* |
| | Within Groups | 142.66 | 42 | 3.39 | |

*P < 0.05 Table F, df (2, 42) at (0.05) = 3.22

The above table indicates the results of analysis of variance on selected psychomotor and psychological variables among different age groups of women basketball players. From the table it can be seen that the calculated 'F' value of speed among the three different age group was 5.59, for agility the calculated 'F' value was 23.51 and the calculated value of locus of control was 5.08, which was greater than the table value of 3.22, indicating that there was a significant difference among the different age groups of women basketball players (p < 0.05) for the degree of freedom (2, 42) at 0.05 level of confidence.

**TABLE I (B)**

**SCHEFFE'S POST HOC TEST OF SELECTED PSYCHOMOTOR AND PSYCHOLOGICAL VARIABLES AMONG WOMEN BASKETBALL PLAYERS**

| Variables | Group I (16-20yrs) | Group II (21-25yrs) | Group III (26-30yrs) | Mean Difference | CI value |
|---|---|---|---|---|---|
| Speed | 8.38 | 7.71 | ------ | 0.67 | 1.30 |
| | 8.38 | ----- | 8.11 | 0.27 | |
| | ------ | 7.71 | 8.11 | 0.40 | |
| Agility | 10.84 | 10.02 | ------ | 0.82 | 1.30 |
| | 10.84 | ----- | 11.39 | 0.55 | |
| | ----- | 10.02 | 11.39 | 1.37* | |
| Locus of Control | 11.80 | 13.33 | ------ | 1.53 | 1.83 |
| | 11.80 | ----- | 11.26 | 0.53 | |
| | ----- | 13.33 | 11.26 | 2.07* | |

*P < 0.05, Confidence interval value (0.05) = 1.30

*P < 0.05, Confidence interval value (0.05) = 1.83

From the above table, the mean difference values of speed between group I and II (0.67), group I and III (0.27), group II and III (0.40) reveals that there was no significant difference in speed, which was lesser than the confidence interval value (1.30). The mean difference values of agility between group I and II (0.82), group I and III (0.55) has no significant difference, whereas the mean difference between group II and III (0.40) reveals that there was a significant difference in agility, which was greater than the confidence interval value (1.30). The mean difference values of locus of control between group I and II (1.53), group I and III (0.53) have no significant difference, whereas the mean difference between group II and III (2.07) reveals that there was a significant difference in locus of control and found to be greater than the confidence interval value of 1.83.

## CONCLUSION

On the basis of the findings of the study, it was concluded that the selected psychomotor variables namely speed, agility and psychological variable namely locus of control had shown significant difference among the different age group of women Basketball players.

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