

Comparative Analysis of Selected Psychomotor Skills among Inter collegiate Volleyball and Basketball players

V.R.Murugesan, Ph.D. Research Scholar, Tamil Nadu Physical Education and Sports University, Chennai-127, and

S.T.N. Rajeswaran, Associate Professor, Department of Physical Education, Bharathiyar University, Coimbatore.

Abstract

Psychomotor is a muscular activity associated with mental process. It is a domain that relates to acquiring of various skills through the combined functions of cognitive and muscular activity. The purpose of the study was to compare the selected psychomotor skills among volleyball and basketball players. For this purpose, 20 volleyball players and 20 basketball players ($N = 40$) were randomly selected from various colleges of Chennai. The selected psychomotor skills were hand eye coordination and leg eye coordination. Analysis of variance was used as a statistical technique to analyse the data. The study was concluded that volleyball players had better hand eye coordination and leg eye coordination than the basketball players.

Key words: Hand eye coordination, Leg eye coordination, Volleyball and Basketball.

Introduction

The popularity of sports is still increasing at a fast pace and this happy trend is likely to continue in the future also. The television and press are giving much more coverage to sports and have become effective medium to carry sports to millions and millions of people round the world. Sports have become an important social and cultural activity of the modern world which is being given the rightful place it deserves by the nations and societies of the world.

Psychomotor fitness plays an important role in everyday life activities of human being. It depends on mental processes as well as on peripheral elements of the movement system.

The use of muscles in such a manner that they work together smoothly and effectively rather than hinder one another (Hunter, 1966).

An individual is said to show good coordination when he moves easily and the sequences and timing of his acts are well controlled. It is probably best to think of coordination as referring in a specific task in terms of objectives accomplished through movement patterns with efficient and effective use of musculature.

Coordination is the ability to integrate muscle movements into an effective pattern of movement (schurr, 1980).

Purpose of the Study

The purpose of the study was to comparatively analyse the selected psychomotor skills among inter collegiate volley ball and basketball players.

Hypothesis

It was hypothesized that volleyball players had better psychomotor skills such as hand eye coordination leg eye coordination than basketball players at inter collegiate level.

Review of Literature

Derek et al. (2007) presented meta-analytic review focusing on perceptual - cognitive skill in sport (N=42 studies, 388 effect sizes) with the primary aim of quantifying expertise differences. Effects were calculated for a variety of dependent measures (i.e., response accuracy, response time, number of visual fixations, visual fixation duration, and quiet eye period) using point-biserial correlation. Results indicated that experts are better than non experts in picking up perceptual cues, as revealed by measures of response accuracy and response time. Systematic differences in visual search behaviors were also observed, with experts using fewer fixations of longer duration, including prolonged quiet eye periods, compared with non experts. Several factors (e.g., sport type, research paradigm employed, and stimulus presentation modality) significantly moderated the relationship between level of expertise and perceptual-cognitive skill. Practical and theoretical implications are presented and suggestions for empirical work are provided

Stine et al. (1982) explored the basis for training visual abilities to enhance sports performance is explored. Optometric intervention in sports assumed the following statements to be true: 1. Athletes have better visual abilities than non-athletes and better athletes have better visual abilities than the poorer athletes, 2. Visual abilities are trainable, and 3. Visual training is transferable to the performance of the athlete. The literature demonstrates that athletes have better visual abilities than non-athletes. Studies have shown this to be true in the following areas of vision: Larger extent of visual fields, larger fields of recognition (peripheral acuity), larger motion perception fields, lower amounts of heterophoria at near and far, more consistent simultaneous vision, more accurate depth perception, better dynamic visual acuity, and better ocular motilities. The literature also shows that all of the above skills are trainable. Two studies are cited that support the belief that visual training is transferable to athletic performance but they suffer from inadequate experimental design.

Methodology

The purpose of the study was to comparatively analyse the selected psychomotor skills among inter collegiate volleyball and basketball players. To achieve the purpose of the study 40 players consisting of 20 volleyball players and 20 basketball players from various colleges of Chennai were randomly selected. Subjects underwent hand eye co ordination and leg eye coordination tests. Scores were statistically analysed with analysis of variance and the level of confidence was fixed at 0.05 level for all the cases.

Results and Discussions

Table I
Analysis of Variance on Selected Psychomotor Skills among
Volleyball and Basketball Players

Hand Eye Coordination						
	Mean	SOV	SS	df	MS	F
Volleyball Players	58.89 \pm 3.45	B	3511.35	1	3511.35	66.40*
Basketball Players	40.55 \pm 4.26	w	3067.23	38	80.72	
Leg Eye Coordination						
Volleyball Players	46.22 \pm 3.99	B	1622.40	1	1622.40	25.39*
Basketball Players	35.41 \pm 6.86	w	3705.53	38	97.51	

The required table value for significant at 0.05 level of confidence with df 1 and 38 is 4.02.

The above table shows that the mean values of volleyball and basketball players on hand eye co ordination were $58.89 + 3.45$ and $40.55 + 4.26$ respectively and the F-ratio was 66.40 indicated that there was a significant difference occurs between volleyball and basketball players. The mean values of volleyball and basketball players on leg eye coordination were $46.22 + 3.99$ and $35.41 + 6.86$ with F-ratio of 25.39 which shows that there was a significant difference occurs between the groups.

Psychomotor Skills

The overall results shows that there was significant difference occurs between volleyball and basketball players on hand eye coordination and leg eye co ordination where as volleyball players better in hand eye co ordination and leg eye co ordination than basketball players.

Conclusion

It was concluded that the volleyball players had better psychomotor skills such as hand eye coordination and leg eye coordination than basketball players at inter collegiate level.

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