IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Study of Eye-Hand Coordination among the Racket Games Players of Manipur

Kh. Lojit Singh, Kh. Rajen Singh*

Dept. of Physical Education, Health Education & Sports, D.M. College of Science, D.M. University, Manipur, India

Abstract

The study drive was to find the eye-hand coordination among the racket games players. Thirty (30) male each players of racket games viz. badminton, lawn tennis and table tennis were selected those participated in Inter-collegiate and State level tournament of Manipur whose age ranged from 19-21 years. Coordination test was tested by ball transfer between eyes and hands. To analyse and interpreted the study, ANOVA was used at 0.05 level of significant. From the statistical analysis it was concluded that that there were significant differences between the means of badminton, table tennis and lawn tennis players of Manipur to eye-hand coordination.

Keywords: Eye-hand Coordination, Badminton, Lawn Tennis, Table Tennis

Introduction

Vital aimed at everyday being actions is eye-hand coordination progressing with age. Visual skills show a significant part in permitting us to achieve events of day-to-day competently. Visual evidence is acquired by the high-resolution images on retina and eye movements. Capability to incorporate muscles movements into an effective arrangement of effort is coordination. It marks the variance concerning good and poor presentation of an individual's actions reflecting in the talent to execute a movement efficiently, exactly, hastily, and competently. Coordination skill consents players to accomplish a cluster of activities by enhanced feature of movement. This requires for extreme operation of provisional skills, practical skills. The role of eye-hand coordination (EHC) is toward organise visual inward information, compute and regulate the body situation in the situation and so implement guide responsibilities like i.e. text, holding, sketch and flinging. Players resolve continuously aspiration to enhancement a lead concluded the challenger. EHC is usually acknowledged equally an imperative influence in diverse sports and the aforementioned significance aimed at virtuous sports presentation is incontrovertible, also observed equally

a crucial sponsor to accomplishment in visual skills and essential skills such as grasping and postural stability as well as in explicit interceptive targeting sports such as badminton, tennis and table tennis.

EHC involves pushing, hitting, throwing or pulling skills. It chains the capacity to see and the capacity of the hand consequence in control and accurateness. Badminton, table tennis and lawn tennis are widespread sport international that needs fast and powerful shots. Thus aim of the study was to eye–hand coordination among the Racket Games (badminton, lawn tennis and table tennis) players of Manipur.

Methodology

The descriptive method was used for the study. Purposive survey was adopted to find the problem of eye-hand co-ordination among the racket games players' viz. badminton, lawn tennis and table tennis of Manipur. Thirty (30) male each selected players of racket games were those participated in Inter-collegiate and State level tournament of Manipur whose age ranged from 19-21 years. Coordination test was tested by ball transfer between eyes and hands and the score was recorded in seconds. To analyse and interpreted the study among the selected players, ANOVA was used at 0.05 level of significant.

Result

Aimed at the study, the data concerning were collected from the Inter-collegiate and State level players of different games viz. badminton, lawn tennis and table tennis of Manipur to eye-hand coordination. The statistical outcome of the commenced eye-hand coordination of among game players were highlighted on Table 1.

Table 1: Analysis of variance of Eye-hand coordination among badminton, lawn tennis and table tennis players of Manipur

Sources of Variance	df	SS	MS	F
Between Group	2	28.18	14.09	18.06
Within Group	27	20.71	0.78	

*0.05 level of significance, $F_{0.05}$ (2, 27) = 3.355

Table-1 revealed that there were significant differences between the means of badminton, table tennis and lawn tennis players of Manipur of eye-hand coordination. The calculated 'F' was 18.06 whereas tabulated 'F' was 3.355. Calculated 'F' was larger than the tabulated 'F', which revealed significance in badminton, table tennis and lawn tennis of Manipur players to eye-hand coordination. Thus, there needed of Post-hoc test to assess the significance of paired mean difference between the groups of eye-hand coordination (Table 2).

Table 2: Significant of difference between the paired means of Eye-hand coordination among the badminton, lawn tennis and table tennis players of Manipur

Mean			Mean Difference	Critical Difference
Badminton	Lawn Tennis	Table Tennis		
18.75	19.38		0.63	0.8
18.75		21.05	2.3	0.8
	19.38	21.05	1.67	0.8

*Significant at 0.05 level

From Table 2 showed that the mean of eye-hand coordination significantly varied in badminton and table tennis players (MD = 2.3). Lawn tennis and table tennis (MD = 1.67) as the mean difference value were higher than the critical difference value of 0.8 at 0.05 level of confidence. The mean difference value of badminton and lawn tennis (MD = 0.63) was less than the critical difference value of 0.8 hence the difference was insignificant statistically.

Discussion and Conclusion

It is moreover created that there are significant differences in the eye-hand coordination of different game players. Coordination is the important term particularly in sports where levels of coordination are at work. The level of coordination between different players is sport specific and depends upon the sports skills. The coordination of person's individual physique structures is a overall motor aptitude which is mostly one's distinctive value.

Thus, in what way the role of reflection when the player hits must be acknowledged, as well as the influence of eye-hand coordination which plays an exact main part in hitting the competitor and must too be identified by the player and the coach himself. Uncertainty a player previously obligates good eye-hand coordination; good hitting preparation is unique means. The player's level of coordination, the player's accurateness skill will progress swiftly.

Bibliography

Abernethy B, Wood JM. Do generalized visual training programmes for sport really work? An experimental investigation. *Journal of Sports Sciences*, 2001; 19: 203-222.

Aditama F, Sugiharto, Kusuma DWY. The correlation of arm muscle strength, grip strength, and body flexibility to the results of long-distance shots on woodball. *Journal of Physical Education and Sports*, 2020; 9(1): 69-75.

Ahwadi L, Yudiana Y, Kusmaedi N. The relationship between eye and hand coordination with the catch of the infield, outfield ball in the softball sport. *Journal of Applied Sports Science*, 2016; 1(2).

Akbari M, Dlis M, Widiastuti. The effect at muscle power arm, hand-eye coordination, flexibility and self-confidence upon badminton smash skill. *Journal of Indonesian Physical Education and Sport*, 2017; 3(2): 84-94.

Andria Y, Igorosky A. The contribution of grip strength and eye-hand coordination towards service accuracy in tennis athletes. *Jipes-Journal of Indonesian Physical Education and Sport*, 2020; 6(01): 17-22.

Assar S, Rahavi Ezabadi R, Shojaei Baghini A, Maleksabet N. The relationship between reaction time, eye-hand coordination with visual field in elite table tennis players. *Asian Journal of Sports Medicine*, 2022; 13(2): e115787.

Carey DP. Eye–hand coordination: eye to hand or hand to eye? *Current Biology*, 2000; 10: R416–9.

Cotti J, Vercher JL, Guillaume A. Hand–eye coordination relies on extra retinal signals: Evidence from reactive saccade adaptation. *Behavioural Brain Research*, 2011; 218(1): 248-252.

Faber IR, Oosterveld FGJ, Van der SN, Maria WG. (2014). Does an eye-hand coordination test have added value as part of talent identification in table tennis? A validity and reproducibility study. *Plos One*, 2014; 9(1): e85657.

Fayogi NU, Sukamti ER, Hartanto A, Yachsie BTPWB, Ayudi AR, Arianto AC, Nurdin U. Study of the correlation between arm muscle power, arm length, hand-eye coordination, and concentration on gate-in results in woodball. *International Journal of Multidisciplinary Research and Analysis*, 2022; 5(3): 606-615.

Gabbard. Hand preference consistency and eye-hand coordination in young children during a motor task. *Journal of Sports Science*, 2002; 20(3).

Halder S, Saha GC. A comparative study of hand eye coordination between sportsmen and non-sportsmen. *International Journal of Physical Education, Health & Sports Science*, 2013; 9(1): 76-9.

Hassan W. The effect of sports vision training on performance of table tennis Amateurs. *Theories & Applications, the International Edition*. 2014; 4(2): 89-92.

Imaduddin MF. The relationship between arm muscle strength and hand eye coordination on mastery of long stroke technique in woodball. *Journal Power of Sports*, 2020; 3(2): 37-41.

Irem S, Mohammad N. Comparative study of eye–hand coordination among volleyball playing and nonvolleyball playing university students. *Saudi Journal of Sports Medicine*, 2020; 20: 64-9.

Pathare SD. A comparative study of eye hand coordination among games players. *International Journal of Physical Education, Sports and Health*, 2016; 3(2): 382-383.

Paul M, Shukla G, Sandhu JS. The effect of vision training on performance in tennis players. *Serbian Journal of Sports Sciences*, 2011; 5(1): 11-16.

Prodea C, Pătraşcu A, Stanciu LAM. (2013). The effects of hand-eye coordination over postural balance. *Studia Universitatis Babes-Bolyai, Educatio Artis Gymnasticae*, 2013; 58(3): 31.

Rodrigues ST, Vickers JN, Williams AM. Head, eye and arm coordination in table tennis. *Journal of Sports Sci*ence, 2002; 20(3): 187-200.

Schwab S, Memmert D. The impact of a sports vision training program in youth field hockey players. *Journal of Sports Science and Medicine*, 2012; 11(4): 624-631.

Wong TKK, Ada WW, Liu KPY, Chung LMY, Young-Hyeon B, Fong SSM, Ganesan B, Hsing-Kuo W. Balance control, agility, eye–hand coordination, and sport performance of amateur badminton players: A cross-sectional study. *Medicine*, 2019; 98:2.

Yuan YWY, Fan X, Chin M, So RCH. Hand-eye co-ordination and visual reaction time in elite badminton players and gymnasts. *New Zealand Journal of Sports Medicine*, 1995; 23(3): 19-22.

Zetou E, Vernadakis N, Tsetseli M, Kampas A, Michalopoulou M. The effect of coordination training program on learning tennis skills. *Sport Journal*, 2012; 15(1): 1-1.