

COMPARATIVE STUDY ON COORDINATIVE ABILITIES AMONGSQUASHANDBADMINTON MALE PLAYERS

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ABSTRACT

Coordination skills are essential for success in sports since they allow for better movement control and efficiency. The researchers set out to examine the similarities and differences between the coordinated efforts of elite squash and badminton players. Twenty male collegiate-level athletes (15 from each sport) were chosen at random. Coordination was measured using three different parameters: static balance, mobility, and agility. Range of motion is the greatest amount of mobility that can be achieved at a joint, whereas static balance is the athlete's ability to maintain balance when standing stationary. However, coordination is the capacity to execute many motions simultaneously and effectively. Using a 5% threshold of significance, the acquired data were analysed using independent t-tests. Static balance, range of motion, and coordinating skills were not significantly different between squash and badminton players, according to the study. This suggests that similar degrees of coordination are needed for success in both sports. Coordination skills are highlighted as crucial to athletic success in this research. The performance of athletes may be enhanced by working to better their coordination skills. Training and practice are essential for developing these skills, which in turn may help athletes refine their movement patterns, enhance their balance, and ultimately achieve greater success in their chosen sports. As a result of the research presented here, it is clear that athletes would do well to work on their coordination skills. The results indicate that the coordination skills required for badminton and squash are comparable. These findings have implications for how coaches and trainers design programmes to help athletes improve their coordination and overall performance.

Keywords: Squash, Badminton, static balance, range of motion, and coordinative abilities.

INTRODUCTION

Coordination ability refers to the ability to perform complex spatial-temporal movement structures quickly and accurately. In the context of sports, coordination abilities are considered to be a visible manifestation of the control and regulation processes of the central nervous system

during motor activities(Deepa G. 1996). The complex of coordination abilities consists of a group of basic coordination abilities that are essential for athletes to perform well.Squash and badminton are two popular racket sports that share many similarities. Both sports involve using a racket to hit an object over a net and score points when the opponent cannot return the ball. Both sports can be played in singles or doubles, and both have worldwide appeal and are Olympic disciplines.While these similarities suggest that the two sports may also share similar coordinative abilities, researchers have sought to identify characteristics that distinguish the two(Pankonin, J. 1967). Although squash and badminton both emphasize similar athletic skills such as reaction time, there are other coordinative abilities that may be more specific to each sport.For example, squash players require excellent hand-eye coordination and the ability to move quickly and gracefully around the court. Squash players must also be able to change direction quickly and maintain their balance while performing rapid movements. These skills are essential for success in squash, which is a fast-paced and physically demanding sport.In contrast, badminton players require exceptional agility, speed, and precision to execute a wide range of shots. The fast-paced nature of badminton demands excellent reaction time and footwork, as players must constantly move around the court to return their opponent's shots(Dr. PushendraPurashwani 2015). In addition, badminton players need to be able to jump high and move quickly to hit high shots, which require a different set of coordination abilities compared to squash.Despite the differences between the two sports, both require a high level of coordinative abilities for success. It is worth noting that these abilities can be developed through practice and training. Athletes can improve their hand-eye coordination, reaction time, agility, balance, and other coordinative abilities through targeted exercises and drills.In summary, coordination ability is a critical aspect of sports performance, and squash and badminton are no exception. While both sports share some similarities, they also have distinct differences in play and strategy that require different sets of coordinative abilities. Understanding these differences can help coaches and athletes develop targeted training programs that enhance specific skills and improve overall performance. The purpose of the study to compare the coordinative abilities between Squash and Badminton Male Players.

METHODOLOGY

The steps involved in carrying out this research are as follows: the selection of participants, the selection of variables, the selection of criteria measures, the testing process, and the selection of the statistical technique used for the analysis of data.

*Selection of the Subject:*Subjects who participated in the Inter University Competition were chosen as the subjects for this study in order to fulfil the requirements of the research project. The participants were split evenly between the sports of squash and badminton. The average age was 20.95 years, while the standard deviation was 1.98 years. No ailments were present in any of

the individuals who were chosen to participate in the research. The written consent was taken from the subjects.

*Procedure:*The study participants, consisting of badminton and squash players, were selected and given instructions on the technique and administration of the tests. The researchers chose three parameters to determine the subjects' coordinative abilities: static balance, assessed using sensbalance (in degrees), range of motion (in seconds), and coordinative abilities (in degrees). These variables were specifically chosen for this study. The nature and aim of the research were explained to the badminton and squash players, and they were given the opportunity to ask questions for clarification before the test administration. At the conclusion of the test, the players were provided with a summary of the study for their acknowledgement.

*Statistical technique:*IBM SPSS (version 18.0) was used for the statistical analysis. The descriptive statistics of mean and standard deviation were computed, to check the normality of the data for the normality of the data Kolmogorov- Smirnov and Shapiro-Wilk test used(Verma, 2013). and an independent t-test was used to determine whether badminton and squash players differed in the selected coordinative abilities or not. 0.05 level of significance to determine whether or not the mean change in scores was statistically significant.

RESULTS

In order to determine the features of each group and the mean difference between the groups in terms of specific coordinating skills, descriptive (mean standard deviation) and comparative (t value) statistics were calculated and provided in table 1 below:

Table 1: Descriptive and Comparative Statistics of Coordinative Abilities

Variables	Squash (M±SD)	Badminton(M±SD)	Significance
Static balance	24.88±0.82	25.64±0.44	0.45
Range of motion	48.57±2.13	47.77±1.07	0.18
Coordination	17.62±0.59	14.08±5.22	0.03

In Table 1, the collective information of descriptive (mean and standard deviation) as well as the comparative statistics of all selected coordinative abilities of both the groups is presented, in which the comparative result showed the significant difference found in coordinative abilities ($p < .04$)only and other variable was not significant as the p-value is greater than 0.05.

DISCUSSION

The variable coordination has been found to be significantly different. Badminton players have better coordination than squash players. It was discovered by Masrath Jan and Dr. Jai SankerYaday (2014) due to the nature of a regular exercise programme. The badminton players' muscle tone, joint mobility, and neuromuscular coordination may have improved with a regular exercise regimen that was carefully chosen. This could also be because the nature of badminton is more physically demanding than squash and squash players. Singh Suresh Kumar (2013). The results show that there were no statistically significant differences between the two groups for static balance or reaction time. Furthermore, it was proposed that a comparison of coordination skills between players and non-players of other games could be made. The goal of this scoping review is to locate frequently used push-up variations in the literature and analyse how they affect healthy adult subjects' levels of muscle activation. The traditional push-up (PU) is a closed-chain exercise meant to improve the dynamic stability of the upper extremities. The body must first be lowered to the floor until the elbows are bent at a 90-degree angle, then it must be raised to the starting position. The serratus anterior (SA) contracts more during this exercise than the upper fibres of the trapezius (UT), which may help treat scapulothoracic muscle dysfunction. The standard push-up exercise can be altered in a variety of ways, such as by altering joint angles, body positions, or the stability of the surrounding environment. With the help of this information, rehabilitation programs can be created that meet the functional requirements of sports and employment-related activities and help people with closed-chain upper extremity demands reach their rehabilitation objectives.

CONCLUSIONS

Within the limitation of the present study, the following conclusions were drawn: There was no significant difference in static balance between squash players and badminton players. There was no significant difference in range of motion of squash players and badminton players. There were significant differences in coordination among squash players and badminton players.

REFERENCES

- Deepa G. (1996). Relationship of coordinative abilities to shooting performance in basketball. Unpublished Master's thesis, LNIPE, Gwalior.
- Dr. Pushendra Purashwani (2015). Comparison of Coordinative Abilities between Squash and Badminton Players. *International Journal of Physical Education & Sports Sciences / Physical Education, Health, Fitness & Sports*, 7(14).
- Faber, I. R., Bustin (2014) Assessing personal talent determinants in young racquet sport players: a systematic review. *Journal of Sports Sciences*. 34, 5, p. 395-41016 p.

Marina Tsetseli (2010). The effect of of a coordination training program on the development of a squash service technique. *biology of exercise.6.1*

Özdemir Atari (2015s). Comparison of static and dynamic balance parameters of athletes in squash and badminton sports. *European Journal of Physical Education and Sport Science*, 4(1).

Ozerove, Y.V., Belov, S.A., Gorinevskeya, V.S. Bocharove, L.G. Kulkinova, L.P., Travina, A.P. and Sukole, S.I. (1982), "Comparison of Selected Anthropometric Measurements and Coordinative Abilities variables of Volleyball players", *as cited in thesis for international seminar for volleyball coaches Moscow.*

Pankonin, J. (1967). A study of relationship of selected measures to squash ability. *Completed research in Health, Physical Education and Recreation 9*: p.88

Ranjeet Singh Sandhu (2017). Coordinative abilities between Badminton and Squash Players: A comparative study. *International Journal of Yoga, Physiotherapy and Physical Education*, 2(6) pp. 68-70.

Reza Behdari (2015). Comparison and Description of Fitness Level (Physiological and Anthropometric Profiles of Selected Versus Non-Selected Iranian National Team Table Squash Players. *International Journal of Science Culture and Sport (IntJSCS) 4*.

Sharma, Sharda (1996), "Diagnostic Study of Coordinative Abilities of Sports Boys and Girls in Haryana." (Unpublished Ph.D. Thesis Submitted to Kurukshetra University, Kurukshetra, 1996)

Timo Jaakkola (2010). Differences in the Motor Coordination Abilities Among Adolescent Gymnasts, Swimmers, and Ice Hockey Players. *The Journal of University School of Physical Education, Wroclaw*, 18(1).