COMPARISON AMONG DIFFERENT SPORTS ON ANTHROPOMETRIC MEASUREMENTS & COORDINATIVE ABILITIES

Dr. Chandra Shekhar Singh Tomar
Sports Officer, Collage of Agriculture, RVSKVV, Gwalior .

ABSTRACT

The study's purpose was to evaluate volleyball and handball players' anthropometric proportions and co-ordination ability. Twelve male volleyball players and twelve male handball players from the Gwalior district participated in the study. The necessary information for comparing the stated anthropometric factors and coordinative abilities was acquired, and four anthropometric variables and four coordinative abilities were chosen for this investigation. An Independent t-test was used to determine whether there was a significant difference in Anthropometric variables and Coordinative abilities between the two groups, and it was found that there was no significant difference in Anthropometric variables or Coordinative abilities between Volleyball and Handball players.

KEYWORDS : *anthropometric measurements &co-coordinative abilities.*

INTRODUCTION

In hockey, motor performance attributes such as strength, speed, endurance, power, agility, flexibility, and co-ordination are all common. When a winner cannot be determined in a certain amount of time, the players must continue to engage their opponents efficiently within the time limit. Today's greatest hockey players must have amazing speed, agility, power, strength, and endurance, as well as be in top physical and mental shape, to manage the demands and expectations of competition.

It is a method of portraying a person's size and shape numerically, whether living or dead, and consists primarily of body measurements.

Within certain limitations, body types can be utilised as a predictor of athletic ability. Football, soccer, and hockey, for example, are likely to pique the attention of the piknic type, whereas jogging or tennis are likely to pique the interest of the athletic type. Body type classification, on the other hand, isn't always precise, therefore physical educators should be wary of relying on it too heavily. As a basis for categorising groups for physical education activities, age, physiological maturation, interests, skill, size, strength, physical fitness, and other equivalent criteria should be used with various body type classifications. When it comes to demonstrating world-class prowess in games and sports, volleyball and handball are no exception. The ability to coordinate plays a vital role in the development of skills and the accumulation of knowledge.

The purpose of this study was to assess the coordination abilities and anthropometric measurements of volleyball and handball players.

The study focused on a group of male volleyball and handball players from the Gwalior district who possessed the following coordinative abilities: Standing height, weight, thigh girth, and calf girth, as well as

selected anthropometric measurements: Orientation ability, Differentiation ability, Reaction ability, Balance ability, and selected anthropometric measurements: The current study predicted that there would be a significant difference in Anthropometric Measurements between Volleyball and Handball players, as well as a significant difference in Coordinative skills.

METHODOLOGY

Twelve male volleyball players and twelve male handball players from respective match practise groups in the Gwalior district were chosen as subjects in this study, with ages ranging from 19 to 24 years. Table 1 shows the coordinative skills and anthropometric measures used for the investigation.

Table 1 CRITERION VARIABLES OF SELECTED VARIABLES

Selected Components	Variables	Test
Coordination Abilities	Orientation ability	Numbered Medicine Ball run test
	Differentiation ability	backward Medicine Ball throw test
	Reaction ability	Ball reaction exercise test
	Balance ability	long nose test
Anthropometric Measurements	Standing Height	Wall scale
	Weight	weighing machine
	Thigh girth	Gulic tape
	Calf girth	gulic tape

The information was gathered using Peter Hirtz's proposed coordinative ability tests as well as anthropometric measures. Before the testing began, all of the subjects were displayed and discussed, with enough opportunities for practice to familiarize students with the tests. After a thorough warm-up, the data was obtained. An independent t test was used to assess the coordination ability and anthropometric measurements of volleyball and handball players. The significance threshold was set at 0.05.

FINDING

Table 2
SIGNIFICANCE OF DIFFERENCE AMONGVOLLEYBALL AND HANDBALLPLAYERS (ANTHROPOMETRIC MEASUREMENTS)

Variables	Volleyball			Handball			t-test
	Mean	S.D.	σDM	Mean	S.D.	σDM	
1. Height	165.83	4.77	1.40	160.91	4.10	1.18	1.23
2. Weight	64.41	4.34	1.31	64.58	7.40	2.13	.768
3. Thigh Girth	44.41	20.3	5.63	53.66	3.96	1.14	.563
4. Calf Girth	36.33	2.13	.63	37.25	2.66	.76	.368

$t_{0.05}$ (22) = 2.07

Because the computed value (1.23) was smaller than the tabulated value (2.07) at the 0.05 level of significance, Table 1 reveals that there was no significant difference in standing height between Volleyball and Handball players. There was no significant difference in total body weight between volleyball and handball players since the computed value (.768) was smaller than the tabulated value (2.07). Because the computed value (.563) was smaller than the tabulated value (2.07) at the 0.05 level of significance, there was no significant difference in thigh girth between Volleyball and Handball players.Because the computed value (.368) was smaller than the tabulated value (2.07) there was no significant difference in calf girth between Volleyball and Handball players.

Table 3
SIGNIFICANCE DIFFERENCE AMONG FOOTBALL AND HOCKEY PLAYERS
(CO-ORDINATIVE ABILITIES)

Variables	Volleyball			Handball			t-test
	Mean	S.D.	σDM	Mean	S.D.	σDM	
1. Balance Ability	9.49	1.03	.29	9.86	1.44	.41	1.42
2. Differentiation Ability	9.46	3.12	.90	11.36	3.40	.96	1.58
3. Reaction Ability	.59	.25	7.25	.95	.37	.10	.683
4. Orientation Ability	7.42	.51	.14	7.21	.57	.16	.063

$t_{0.05}$ (22) = 2.07

Because the computed value (1.42) was smaller than the tabulated value (2.07) at the 0.05 level of significance, Table 3 reveals that there was no significant difference in Balance Ability between Volleyball and Handball players. Because the computed value (1.58) is smaller than the tabulated value (2.07) at the 0.05 level of significance, there was no significant difference in Differentiation Ability between Volleyball and Handball players. Because the computed value (.683) was smaller than the tabulated value (2.07) at the 0.05 level of significance, there was no significant difference in Reaction Ability between Volleyball and Handball players.Because the computed value (.063) was smaller than the tabulated value (2.07) at the 0.05 level of significance, there was no significant difference in Orientation Ability between Volleyball and Handball players.

CONCLUSION

There is no substantial difference between volleyball and handball players when all Anthropometric parameters are taken into account. The subjects participated in a variety of activities in addition to their favorite games of volleyball and handball. Subjects had been doing roughly 3 hours of general activity and about 1 hour of volleyball or handball. The insignificant findings must have resulted from the workout schedule of professional physical education students. In any of the tested coordinative ability features, data analysis indicated no significant differences between volleyball and handball players. This could be because the chosen subjects were physical education professionals who spent a substantial amount of time participating in numerous activities each day but just a little amount of time engaged in the chosen sports. Volleyball and handball players competing in other sports must have negated the impact of volleyball and handball, resulting in a statistically insignificant difference. According to the data, there is no statistically significant difference in anthropometric variables between volleyball and handball players. As a result, the investigation's primary hypothesis was accepted. The results of the study also demonstrate that in the selected co-ordinative abilities, there is no significant difference between volleyball and handball players.

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