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Research Article

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COMPARISON OF BALANCE ABILITY AND RHYTHMIC ABILITY OF HANDBALL PLAYERS AT DIFFERENT LEVELS OF PARTICIPATION

Doley M.[1*], Tiwari U.[2], Tiwari D.[3]

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[1*] Mohini Mohan Doley, Fitness Trainer, , BanasthaliVidyapith, Tonk, Rajasthan, India.

[2] Usha Tiwari, AssociateProfessor, , Central University of South Bihar, , Gaya, India.

[3] Dhirendra Tiwari, AssistantDirector, , Banarus Hindi University, Varanasi, UP, India.

The purpose of the study was to compare Sub Junior, Junior and Senior Handballplayers bytheirselectedcoordinativeabilities. The study was conducted on 120 subjects with a purpose to compare Sub Junior, Juniorand Senior Handball players by their coordinative abilities. The variablesselectedfor thestudywere Balance ability and Rhythmic ability. forty subjects were selected from each level i.e subjuniors, juniors and seniors. For Sub Juniors, the age of the subjects was 16 years and below. Forjuniors, the age of the subjects was 19 years and below. For seniors, the age of the subjects wasabove 19 years. To compare the selected coordinative abilities among sportsmanbelonging tothree levels (Sub Junior, Junior and Senior), one-way analysis of variance(ANOVA) was usedandlevelofsignificancewassetat0.05level. It was concluded that: In relation to Balance ability significant difference was foundbetween three age group level i.e sub juniors, juniors and seniors. In case of Balance ability, thesequence of performance betweenthree agegroupwas seniors>juniors>sub-juniors.Inrelationto Rhythmic ability significant difference was found between three age groupleveli.esubjuniors, juniors and seniors. In case of Rhythmic ability, the sequence of performance betweenthreeagegroupwasseniors>juniors>sub-juniors.

Keywords: Balance, Ability, Handball, Players and Levels

Corresponding Author

Mohini Mohan Doley, Fitness Trainer, , BanasthaliVidyapith, Tonk, Rajasthan, India.

Email: mohandoley1212@gmail.com

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Introduction

Handball is a fastest moving and exciting game requiring quick thinking as well as physicalskills.PlayersandspectatorsparticipateinHandballwithhighgamespirit.ThegameofHandballis an opportunity to combine, speed of judgment, speed of physical and mental reaction andexpertise with body and ball. These entire combines together to help in achieving the skills, whichneedfinesseofmovement.Toestablishtherelationshipresearchhastriedtoaccretionwhetherallthesecoordinativeabilitieshaveanyimpactonaccuracyinkicking.

ModernHandball is characterized by itshightempo. Toplay Handball successfully, playersmustreactfasterthaneverwhenthey receivetheball,aswellasmakingfrequentsuddenchanges of direction, sprints into free space and instant switches from defense to attack. Thedemands onHandball players areso great that special andsystematictraining of their runningcoordination,especiallytheirrunningtechniqueandrhythm,appearsessential.

Objective of the Study

The purpose of the study was to compare Sub Junior, Junior and Senior Handball players by their selected coordinative abilities

Methodology

The subjects for this study were selected from national handball camp of Rajasthan who participated in various competitions, such as sub-juniors, juniors and seniors national Championships in Handball. A total of 120 subjects were selected consisting of 40 players in each level i.e. Sub-Junior, Junior and Senior

01. For Sub Juniors, the age of the subjects was16yearsandbelow.
02. For Juniors, the age of the subjectswas19 years and below
03. For Seniors,the age of the subjects was above19years.

Keeping in mind the specific purpose of the study to find out the relationship between coordinative ability and performance of Handball players at different levels, the following variableswereselected:

01. Balance ability
01. Rhythmic ability
02. The necessary data was collected by administering coordinative abilities tests ssuggested by PeterHirtz.
03. The equi poseability was measured by using long no setestand was recorded in seconds.
04. Rhythmic ability

The necessary data was collected by administering coordinative abilities tests suggested by Peter Hirtz.

01. The equi poseability was measured by using long no setestand was recorded in seconds.
02. Rhythmic ability

Results

The findings and discussion of findings wither gard to the present study have been presented in this section. Descriptive profiles of co-ordinative abilities (Balance ability Rhythmic ability) of various level and the comparison of co-ordinative abilities between the agegroups (Sub-Junior,JuniorandSenior).

Table-1:Descriptive Statistics of Co-Ordinative Abilities at Various level Players

Enclosed as Annexure 01

Table-1 reveals them eanand standard deviation of co-coordinative abilitiesofIndianHandball players at various levels. At SubJunior level the observedmeanandstandarddeviationfor each coordinative ability were as follows: Balance ability (10.13 $\pm$ 1.55) Rhythmic ability (1.69 $\pm$ 0.75). At Junior level the observed mean and standard deviation of each coordinativeability were as follows: Balance ability(8.55 $\pm$ 1.56), Rhythmic ability (1.12 $\pm$0.50). At seniorlevel the observed mean and standard deviation of each coordinative ability were as follows:Balance ability(7.22$\pm$0.83), Rhythmic ability (0.99$\pm$0.49).

Table-2:Balance Ability among Players of Three Different Levels of Participation.

Enclosed as Annexure 02

It is evident from table 2 that significant difference was found among the Handball playersof three different levelsastheF-value of 34.45 ishigher than thetabulatedvalue of 3.10 with2,87 df at .05 level of significance. Since the oneway analysis

Of variancewas found significantinrelationtoBalance Ability,theleastsignificant(LSD)testwasappliedtofindo utwhichofthe different of the means amongst the different groups (Sub Juniors, Juniors and Seniors) werestatisticallysignificant(Table-3).

Table -3: Least Significant Difference Post-Hoc Test for Means of the Sub Juniors, Juniors and Seniors in Relation to Balance Ability.

Enclosed as Annexure 03

It is evident from table-3 that mean difference of sub juniors and juniors; sub juniors andseniors; juniors and seniors was found to be significant at 0.05 levels of significance in relation toOrientation ability. This table also shows that Seniors are having better Orientation ability thanJuniors and Sub Juniors and it further reveals that Juniors have better Orientation ability than theSubJuniors.

Table -4: Analysis of Variance of the Means of Reaction Ability among Players of Three Different levels of Participation

Enclosed as Annexure 04

It is evident from table 4 that significant difference was found among the Handball players of three different levels as the F-value of 12.08 is higher than the tabulated value of3.10with2,87d fat.05 level of significance. Since the one way analysis of variance was found significant in relation to Rhythmic

Table -5: Least Significant Difference Post-Hoc Test for Means of the Sub-Juniors, Juniors and Seniors in Relation to Reaction Ability.

Enclosed as Annexure 05

It is evident from table-5 that mean difference of sub juniors and juniors; sub juniors andseniors; juniors and seniors was found to be significant at 0.05 levels of significance in relation to Balance ability. This table also shows that Seniors are having better balanceability than Juniors and Sub Juniors and it further reveals that Juniors have better Rhythmicability than the Sub Juniors.

Discussion of Findings

Significant different was Found between the Handball Players of three different levels inrelation toBalance ability and Rhythmic ability at0.05level. Afterapplying the post –hoc(leastsignificant difference) test it wasobservedthat inrelationtobalanceability meandifference of sub juniors and juniors; sub juniors and seniors; juniors and seniors was found to besignificant at 0.05 level of significance and also In relation to Reaction ability mean difference ofsubjuniors andJuniors; subjuniors and seniors; juniors and seniors wasfoundto be significantat0.05levelofsignificance.

ThismightbeduetoreasonthatseniorHandballplayersd evelopedCoordinativeabilitiesby the long duration of participation and by the help of general and specific exercises, additiona lmeans for improving motor sense organs, variation of exercises,variation of movement execution, Variation in external conditions, combination of movement, change in informationuptake, practice against time and due to practice under fatigue.

Annexure

Annexure 01

Table-1:Descriptive Statistics of Co-Ordinative Abilities at Various level Players

Variouslevels	Co-ordinativeability	Minimum	Maximum	Mean	Std. Deviation
Sub-Junior	Balance ability Rhythmic ability	9.10 1.20	14.60 3.60	12.13 2.89	3.55 1.75
Junior	Balance ability Rhythmic ability	8.30 1.05	12.80 2.71	10.55 3.16	3.76 1.30
Senior	Balance ability Rhythmic ability	7.80 1.07	10.30 2.51	9.27 1.97	2.63 2.50

Annexure 02

Table-2:Balance Ability among Players of Three Different Levels of Participation.

	SumofSquares	df	MeanSquare	F	Sig.
BetweenGroups	112.03	8.00	57.52	35.45*	.00
WithinGroups	160.39	54.00	5.84		
Total	277.43	82.00			

*Significant at 0.05 levelsF .05(2,87)=3.10

Annexure 03

Table -3: Least Significant Difference Post-Hoc Test for Means of the Sub Juniors, Juniors and Seniors in Relation to Balance Ability

(I)VariousLevel	(J) VariousLevel	MeanDifference(I-J)	Std.Error	Sig.	95%ConfidenceInterval	
					LowerBound	Upper Bound
sub-junior	jun	1.68*	.35	.00	.86	2.47
		2.61*	.35	.00	2.24	3.70
	ior senior	-1.58*	.35	.00	-2.29	-.58
		1.53*	.35	.00	.68	2.53
junior	sub- juniorsenior	-2.71*	.35	.00	-3.50	-2.61
senior	sub- juniorjunior	-1.63*	.35	.00	-2.3	-.53

*.Themeandifferenceissignificantatthe0.05level.

Annexure 04

Table -4: Analysis of Variance of the Means of Reaction Ability among Players of Three Different levels of Participation

	SumofSquares	df	MeanSquare	F	Sig.
BetweenGroups	7.45	2.00	4.22	13.08	.00
WithinGroups	31.42	77.00	.35		
Total	37.87	87.00			

*Significantat0.05levelsF .05(2,87)=3.10

Annexure 05

Table -5: Least Significant Difference Post-Hoc Test for Means of the Sub-Juniors, Juniors and Seniors in Relation to Reaction Ability.

(I)VariousLevel	(J)VariousLevel	MeanDifference(I-J)	Std.Error	Sig.	95%ConfidenceInterval	
					LowerBound	UpperBound
sub-junior	junior senior	30.07*	5.75	.00	7.64	31.49
		22.50*	5.75	.00	22.08	43.92
junior	sub- juniorsenior	-10.07*	5.75	.00	-32.49	-8.64
		14.43*	5.75	.03	1.01	23.86
senior	sub- juniorjunior	-34.50*	5.75	.00	-44.92	-21.08
		-11.43*	5.75	.03	-22.86	-1.01

*.Themeandifferenceissignificantatthe0.05level.

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