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Influence of positional play on athletic coping skill inventory among the male handball players

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Abstract

The purpose of the present study was to find out the influence of positional play on coping skills among the male handball Players. To achieve this present study, as samples players for each position namely pivot, back and wing 30 players were selected randomly. Thus the total samples for the present study was 90. The selected samples were hailed from various socio- economic conditions. As variables coping skills such as Coping with Adversity, Peaking under Pressure, Goal Setting and Mental Preparation, Concentration, Freedom from Worry, Confidence and Achievement Motivation, and Coachability were selected. Using Athletic Coping Skills Inventory developed by Smith, coping skills of samples were measured. Thus the data for the present study were collected. The collected data were tested using one way analysis of variance to test the significance of mean difference if any on the variables among the pivot, back and wing handball players. Results derived explained that positional play has no significant impact coping skills other than the coping skill of freedom from worry.

Keywords: Coping skills, postional play, coachability, adversity, peaking under pressure

Introduction

Handball is a team sport where two teams of seven players each (six players and a goalkeeper) trying to throw it in the goal of the opposing team using pass and bounce a ball Jn Narayanrao (2013). Team handball is a complex intermittent sport game, which requires players to have well developed aerobic and anaerobic capacities. Handball is a game of hour long play with varied positions namely wing, pivot, back and goal keeping. In the success of the game, each position has its own responsibilities in terms of execution of fundamental skills, techniques tactics and applying psychological skills. In sport, psychological skills are serving as major determinants of performance (Smith and Christensen, 1995) [6]. The development of talent is said to be critical in the teenage years (Gould *et al.*, 2002; Bull *et al.*, 2005) [3, 2]. As such, the development of the psychological framework in keeping with that talent is also important.

In psychology, coping is expending conscious effort to solve personal and interpersonal problems, and seeking to master, minimize or tolerate stress or conflict (Weiten, and Lloyd, 2008). The term coping generally refers to adaptive or constructive coping strategies, i.e. the strategies reduce stress levels. Problem-focused coping is aimed at changing or eliminating the source of the stress. Robinson (2009). According to Crocker *et al.* (1998), coping is seen as an important cognitive process that occurs between stressful events and the subsequent outcome. Performance pressure, personal and family expectations and media scrutiny are just a few of the things an athlete must learn to cope with for successful performance in competition. Poor performances are said to be related to poor management of emotions and lack of coping skills (Gould *et al.*, 1991). Coping enables player in sport to regulate and modify their perception proper regulation and modification of perception to facilitate a more relaxed state of mind that will give rise to optimal performances (Bognar *et al.*, 2009) [1].

In considering the physical and psychological aspects, the responsibilities of positional play have significant variations in their needs. In fact, the player in the positional play of pivot is high in speed and explosive power compared to the back court players. since their responsibility is to feeding the ball to the players is differed from other positional play.

Thus the responsibilities may influence the behavioral differences among the players with varied positional play in handball. Based on the degree of responsibility players are prove to stressful situation depend upon the performance of opponent team. In such a way, in the game of handball players should be evaluated in psychological aspects in addition to physical aspects. Psychological skills serve as deterministic components in the efficiency of complex movements in the game handball. In the efficiency of complex movements involved in the game handball, as deterministic components psychomotor play very crucial role among the positional play. Anyhow, in its need there may be some difference exist. Psychologically, the functions of players in the game situations analyses the means and methods based on situational so as to make the game to win. Such a process makes the players to apprehend the game situations for which a player in need of free from adverse situations if any. Thus, the coping strategies of player helps them to function efficiently. With this perspective, the present study was carried out to study the influence of positional play on coping skills among the varied positional play of male handball players. To achieve this, the mean and methods employed in the present study related to the selection of samples, variables, tools used in collection of data and statistical technique employed are presented as follows.

Selection of Samples

The purpose of the present study was to find out the positional influence on coping skill among the varied positional play of male handball players participated in the inter-collegiate level. As samples, the handball players from the teams qualified for pre-quarter at inter-collegiate level tournaments were selected with the purpose of overcome the differences in the performance on variables among the samples. Thus initially 224 players (Back court position = 96, Pivot position = 64 and Wing position = 64) were selected for the present study. In selection of samples, age group was fixed in the range of 18-24 who were hailed from various socio- economic conditions.

Variables

In the present study, to study how for the individual coping skills are influenced by positional play, based on the nature of the positional play and research studies pertinent factors demanding the performance of players in the particular positions ability of coping was measured using the Athletic Coping Skills Inventory (ACSI-28). Athletic Coping Skills Inventory (ACSI-28) providing psychological framework using seven sport specific subscales: coping with adversity (COPE), peaking under pressure (PEAK), goal setting and

mental preparation (GOAL), concentration (CONC), freedom from worry (FREE), confidence and achievement motivation (CONF), and 'coachability' (COACH). It consists of seven subscales/skills which are measured by four questions each. Each question is measured using a 4-point Likert scale ranging from 0 to 3 with choices of "almost never", "sometimes", "often" and "almost always", whereby players are asked to recall their experience in relation to the situation posed on the questionnaire. A score for each subscale/skill can range from 0 to 12, while the summation of all the scores for each skill creates a value ranging from 0 to 84 called the Personal Coping Resource (composite score). Higher scores are indicative of the ability to cope with the demands of the sport and greater psychological skills or constructs. Validation of the ACSI instrument was done by Smith *et al.* (1995) [6], using confirmatory factor analysis and was found to possess good factorial validity for both males (.84) and females (.88). The ACSI-28 exceeded the goodness of fit criteria and all factor loadings were significant at $p < .001$ (Waples, 2003) [7].

Research Design

In the present study, positional play has been served as categorical variable. Positional play was classified into pivot, back court and wing based on their nature of play in the game. Although the positional play of pivot, backcourt and wing are differed in the degree of athletic coping skill inventory required players of these positions to perform during the game situation invariably their potions so as to maximize their scoring performance. Hence to study the influence of positional play on athletic coping skill inventory among the handball players, as research design comparative research design was employed in this study. For which from the selected samples (N=224) based on status on tournament and voluntary participation using random sampling method further the samples were extracted 30 for Back court position, 30 for Pivot position and 30 for Wing position. Thus totally 90 samples were selected for the final study.

Collection of Data

The need and nature of the research work were explained clearly to the samples used in the study, with the purpose get the quality is data. The selected samples were tested using standardized psychological skill measure such as Athletic Coping Skills Inventory on their voluntary participation and comfortable situation. Thus the data for the present study were collected. The collected data were tested using one way analysis of variance. Further to test the significance of results 0.05 level was chosen as level of significance. The obtained results are as follows.

Table 1: Descriptive statistics

		N	Mean	Std. Deviation
Coping with adversity	Pivot	30.00	5.23	1.72
	Back position	30.00	5.87	2.13
	Wing	30.00	6.40	2.08
	Total	90.00	5.83	2.02
coachability	Pivot	30.00	6.97	1.61
	Back position	30.00	7.40	1.48
	Wing	30.00	7.17	1.37
	Total	90.00	7.18	1.48
concentration	Pivot	30.00	5.83	2.02
	Back position	30.00	6.83	2.00
	Wing	30.00	6.93	2.12
	Total	90.00	6.53	2.08
Confidence and achievement motivation	Pivot	30.00	5.93	2.10
	Back position	30.00	6.10	2.34

	Wing	30.00	6.53	2.39
	Total	90.00	6.19	2.27
Goal setting and mental preparation	Pivot	30.00	4.97	1.59
	Back position	30.00	5.10	1.86
	Wing	30.00	5.27	1.57
	Total	90.00	5.11	1.67
Peaking under pressure	Pivot	30.00	5.13	2.21
	Back position	30.00	5.43	2.16
	Wing	30.00	5.23	1.59
	Total	90.00	5.27	1.99
Freedom from worry	Pivot	30.00	6.00	2.30
	Back position	30.00	7.93	1.55
	Wing	30.00	6.87	2.01
	Total	90.00	6.93	2.11

Table-1 shows the descriptive measures of athletic coping skill of Handball players pertaining to varied positions namely pivot, back positions and wing are as follows. The mean and standard deviation of components of athletic coping skills are: Coping with adversity(5.23,1.72 pivot), (5.87,2.13 Back position), and (6.40,2.08 wing), Coachability (6.97,1.61 pivot), (7.40,1.48 Back position) and (7.17,1.37 wing), Concentration (5.83,2.02 pivot), (6.83,2.00 back position) and

(6.93,2.12 wing), Confidence and achievement motivation (5.93, 2.10 pivot), (6.10,2.34 back position) and (6.53,2.39 wing), Goal setting and mental preparation (4.97,1.59 pivot), (5.10,1.86 Back position) and (5.27,1.57 wing), Peaking under pressure (5.13,2.21 pivot), (5.43,2.16 back position) and (5.23,1.59 wing), Freedom from worry (6.00,2.30 pivot), (7.93,1.55 Back position) and (6.87,2.01 wing).

Table 2: Analysis of Variance on Athletic Coping Skills among the Positional Play

		Sum of Squares	df	Mean Square	F	Sig.
Coping with adversity	Between Groups	20.47	2.00	10.23	2.60	0.08
	Within Groups	342.03	87.00	3.93		
	Total	362.50	89.00			
coachability	Between Groups	2.82	2.00	1.41	0.64	0.53
	Within Groups	192.33	87.00	2.21		
	Total	195.16	89.00			
concentration	Between Groups	22.20	2.00	11.10	2.65	0.08
	Within Groups	364.20	87.00	4.19		
	Total	386.40	89.00			
Confidence and achievement motivation	Between Groups	5.76	2.00	2.88	0.55	0.58
	Within Groups	452.03	87.00	5.20		
	Total	457.79	89.00			
Goal setting and mental preparation	Between Groups	1.36	2.00	0.68	0.24	0.79
	Within Groups	245.53	87.00	2.82		
	Total	246.89	89.00			
Peaking under pressure	Between Groups	1.40	2.00	0.70	0.17	0.84
	Within Groups	350.20	87.00	4.03		
	Total	351.60	89.00			
Freedom from worry	Between Groups	56.27	2.00	28.13	7.17	0.00*
	Within Groups	341.33	87.00	3.92		
	Total	397.60	89.00			

*significant at 0.05 level

In the data analysis, F- test was applied to test means among the varied positions of pivot, back position and wing on selected Athletic coping skill such as coping with adversity, Coachability, Concentration, Confidence and Achievement motivation, Goal setting and Mental preparation, Peaking under pressure and Freedom from worry. The F- value needed for significance for DF 2, 87 at 0.05 levels.

The obtained F-value for the athletic coping skills are 2.60 (coping with adversity), 0.64 (Coachability), 2.65 (Concentration), 0.55 (Confidence and Achievement motivation), 0.24 (Goal setting and Mental preparation), 0.17 (Peaking under pressure) are found to be insignificant at 0.05 level of significance.. From the results, it is inferred that the mean difference exist among the pivot, back position and wing on coping skills used in this study no significant positional influences was observed. Further, it was found that one among coping skills of freedom from worry was found to be significant and confirm the influence of positional play.

Further to test the source of such significant mean difference among the varied positional play on coping skills of freedom from worry, as post hoc test Bonferroni test was applied.

Table 3: Post-hoc test on Freedom free worry among the Positional play

Pivot	Back position	Wing	Mean Difference	Sig
6.00	7.93	-	1.93	0.00
6.00	-	6.87	0.87	0.28
-	7.93	6.87	1.07	0.12

The results of Bonferroni test explained that significant mean differences exists between the pair of pivot and back position whereas no significant mean difference was found between the pair of Pivot and Wing, and back position and wing. Besides it was observed that handball players pertaining to back position were found to be better performance in Freedom free work (7.93) when compared to pivot position of

handball players (6.00 and 6.87). Further when comparing the mean differences existing between the remaining pair of pivot and wing, Back position and Wing, players were found to be similar.

Discussion on Findings

In testing the coping skills among the handball players of varied positions such as wing, pivot and back, no significant mean differences was found on coping skills namely coping with adversity, coachability, concentration, confidence and achievement motivation, goal setting and mental preparation, peaking under pressure other than the coping skill of freedom from worry. In the coping skill of freedom from worry, it was found that positional play has significant impact when analyse these skill, players of back court positions were found to be better compared to pivot position, whereas players of pivot position and wing position found to be similar. The obtained results are discussed with theoretical and empirical constructs. Regarding coping skills among the positional play, the obtained results evidencing that coping skill is essential for the players since either in the game situation of prior to and after the competition the demands placed on them mostly common. In anticipation towards their aim, though individual differences are exist, everyone comes under the same roof. Such a nature of situation exist in the game of handball among the positional play may be the cause and effect for observing the similarities on select coping skills. Meanwhile one among the coping skill of freedom from worry claiming that the player of pivot positional has finds betterment in the status from other positional play. Worry is the cause of man expectations when the attempt to fulfill his needs. In seeking the action wise, the way in which they have to choose and fix the action wise is differ in nature. Some of them find the alternative means whereas some of them go on their way of action as they not prefer the alternate ways. Such a individual difference might have been the effect of the player genetics and environment in which they function. It was confirmed by the research findings of Julius Josstle *et al.* (2014). In his study he observed that coping skill is significantly influenced by the positional play. In fact playing positions have some specific behavior related to the nature of the particular position in the game. In such a way it has been stressed form the research work of Boris Milavic (2013) ^[8] positional play has significant impact over the select coping skills.

Conclusions

Based on the results of the study, the following conclusions have been made.

In testing the significance of positional play on coping skills among the players with varied positional play such as pivot, back court and wing, the obtained results explained that players are found to be similar in the coping skills of coping with adversity, coachability, concentration, confidence and achievement motivation, goal setting and mental preparation, peaking under pressure other than the freedom from worry. The results derived on this is lead to conclude that as the subjects used in the present study are the players participated in the inter-collegiate level and qualified for the pre quarter in the particular tournament, each player has responsibility in term of their team win in the game. Such a common tendency exist among the players may have the impact over the similarities exist in the coping skills invariably playing positions. Further it was concluded that the influence of positional play on one among the coping skills of freedom from worry found to be significant might have been the

source of genetics and environmental impact.

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