

**FLOW-PERFORMANCE ANALYSIS OF SOUTH  
INDIAN UNIVERSITY HOCKEY TEAMS**

**Dr. Saju. S.\***

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\*Associate Professor, F.M.N College, Kollam, Kerala-INDIA.

E.Mail:sajsun2000@yahoo.com

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**Abstract:**

The purpose of the study was to analysis flow and performance among the south Indian university hockey teams. Four south Indian university teams (N=64) placed first four spots in the south zone interuniversity tournament were taken as the subjects of this study. Dispositional flow state scale-2 (DFS-2) (Jackson and Eklund, 2004) was administered. Descriptive statistics and ANOVA were used to analyze the data. Results shows that highly performed teams had high flow score and statistically significant differences were found between the souths Indian university teams in flow States.

**Keywords:** Performance Analysis, Indian Universities & Hockey Players.

**Introduction:**

The history of the game of hockey has its roots well laid in the world's early civilizations. One of the oldest known sports, the game is believed to be in existence about 1200 years before the Ancient Games of Olympia. Unmatched excellence and incomparable virtuosity brought India a string of Olympic gold medals, The Golden Era of hockey in India was the period from 1928 - 1956 when India won 6 consecutive gold medals in the Olympics. What is so peculiar with recent Indian hockey is its inability to handle success. Winning Modern hockey is more psychological than any other factors in elite level. At the elite level, preparation for winning field hockey focuses on the physical aspects of the game. Drills are designed to improve conditioning and physical skills like stick handling, passing, shooting and marking the opposition. Mental skills like focus and emotional control are relatively neglected. Understanding the psychological factors that accompany successful athletic performance is a high priority for applied sport psychology, with a major area of focus being mental links to optimal performance. To advance knowledge in this area, it is important to examine specific psychological constructs with theoretical relevance to optimal performance in order to understand what psychological processes might be contributing to quality of performance. Sport psychology is a science that utilizes the techniques and principles of psychology specifically in physical activity settings (Cox, 1998). The still evolving field of sport psychology pulls from the research and knowledge of several other areas of psychology, including social psychology and psychophysiology, to help coaches and athletes understand the elements of themselves and those around them pertaining to sport, performance, and exercise.

The concept of flow has gained increasing attention by researchers of various disciplines, since its introduction by Csikszentmihalyi (1975) The term "the zone" is frequently used in the sport psychology literature, outlining a state of high intensity, strong focus, superior performance (Young, 2000), and peak experience (Murphy & White, 1995), which is indicated by heightened awareness and intrinsic motivation (Frederick-Recascino & Morris, 2004).

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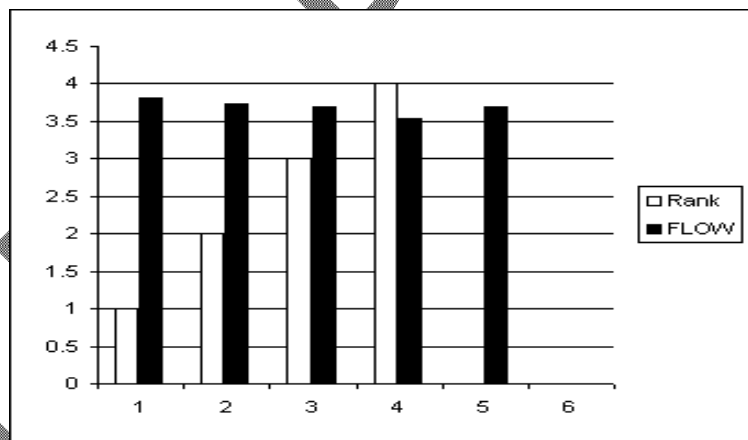
**Method:**

Subjects selected for this study were four south Indian university hockey teams(N=64) placed first four places in the south zone interuniversity championship held at Bangalore(2009-10). Tool used in the present study was Dispositional flow scale-2 (DFS-2) ( Jackson and Eklund, 2004). The first four place holders of south Indian universities were given the DFS-2 and recorded their experiences during the last six months. Descriptive statistics and ANOVA were used to analysis the data of this study. Level of significance was set at 05 level.

**Table.1, descriptive statistics of flow among south Indian universities-DFS-2**

Dependent variable	Rank	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
FLOW	1	16	3.82	.102	.025	3.76	3.87	3.58	4.027
	2	16	3.73	.372	.093	3.53	3.93	2.69	4.25
	3	16	3.70	.093	.023	3.65	3.75	3.55	3.86
	4	16	3.53	.131	.032	3.45	3.59	3.36	3.88
	Total	64	3.69	.230	.028	3.63	3.75	2.69	4.25

Total mean flow of south zone winner was 3.82(SD=.102), runners up was 3.73(SD= .372), third place was 3.70(SD=.093) and the fourth place was 3.53(SD= .131).

**Figure .1, Mean flow score of south Indian university teams and performance rank****Table.2, ANOVA Result of the study**

		Sum of Squares	df	Mean Square	F	Sig.
FLOW	Between Groups	.712	3	.237	5.411	.002
	Within Groups	2.630	60	.044		
	Total	3.342	63			

ANOVA results of the present study shows that statistically significant difference( $F= 5.411$  ,  $p= .002$ )were found among the south Indian university hockey teams in flow.

**Table.3, Pos hoc tests of south Indian universities**

Dependent Variable	(I) rank	(J) rank	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
FLOW	1	2	8.50	7.40	.255	-6.29	2.33
		3	1.16	7.40	.121	-3.17	2.64
		4	2.89	7.40	.000	1.41	4.37
	2	1	-8.50	7.40	.255	-2.33	6.29
		3	3.12	7.40	.674	-1.168	1.79
		4	2.04	7.40	.008	5.67	3.52
	3	1	-1.16	7.40	.121	-2.64	3.17
		2	-3.12	7.40	.674	-1.79	1.16
		4	1.73	7.40	.022	2.55	3.21
4	1	-2.89	7.40	.000	-4.37	-1.41	
	2	-2.04	7.40	.008	-3.52	-5.67	
	3	-1.73	7.40	.022	-3.21	-2.55	

\*. The mean difference is significant at the 0.05 level.

In table 3, post hoc tests of south Indian university teams in DFS-2 indicates that statistically significant difference( $MD= 2.89$ , $P=.00$ )were found between south zone winner and south zone fourth place in total flow. Statistically significant differences were also found between south zone runners up and south zone fourth place( $MD= 2.04$ , $p=.00$ ) and south zone third place and south zone fourth place( $MD=1.73$ , $p=.02$ ).

#### **Discussion:**

The purpose of the study was to analysis the flow state and performance in the south Indian university hockey teams. Result of the present study shows that the mean flow score of south zone winner was the highest( $M=3.82$ ) and the south zone runners up scored the second highest mean flow score ( $M=3.73$ ) followed by the south zone third( $3.70$ ) and fourth( $3.53$ ). The result of the present study supports the views of Massimini(1988) and Jackson and Csikszentmihalyi (1999) that the performance of the activity was enough to trigger the flow experience. ANOVA result of the present study showed statistically significant differences( $F= 5.411$  ,  $p= .002$ ) in flow among the south Indian university teams and subsequent post hoc tests showed statistically significant difference( $MD= 2.89$ , $P=.00$ )were found between south zone winner and south zone fourth place, south zone runners up and south zone fourth place( $MD= 2.04$ , $p=.00$ ) and south zone third place and south zone fourth place( $MD=1.73$ , $p=.02$ ). Result of the study clearly indicates a positive relationship between flow and performance among south Indian university hockey teams. the

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relationship between flow and performance appears to be reciprocal, in which flow influences performance and vice versa. At this point, the results are too vague to draw conclusions on whether there is a one directional connection between flow and performance or between performance and flow. More research is needed to untangle the relationship between flow and performance and to further examine directional or reciprocal links.

**Conclusion:**

Based on the result of the study, the following conclusions were drawn;

- Result of the study shows that the highly performed university teams had the high flow scores.
- There were statistically significant differences among the south Indian university teams in flow states.

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