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## Doping awareness among sportspersons of Punjab: A survey study

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### Abstract

The present study was designed to examine the doping awareness among sportspersons of Punjab in relation to type of sports. A sample of one thousand (N=1000) players composed of five different sports namely handball, football, hockey, kabaddi (Punjab style) and kabaddi (National style) from Punjab state was selected to act as subjects for the present study. Out of 1000, two hundred (n=200) subjects were selected randomly from each game to achieve the purpose of the present study. To obtain the required information with regard to the doping awareness, the self-constructed doping awareness questionnaire was used. The Analysis of Variance (ANOVA-One way) was employed to compare the means of different sports with regard to doping awareness among sportspersons of Punjab. Scheffe's Pos-hoc test was applied to examine the degree and direction of differences where 'F' value found significant. Descriptive statistics was also carried out. The level of significance was set at 0.05. The results of the present study indicated that the hockey players demonstrated significantly high doping awareness as compared to their handball, football, kabaddi (P.S) and Kabaddi (N.S) counterparts.

**Keywords:** Doping, awareness, sports persons

### Introduction

Sports contests have progressively attracted a massive number of athletes to participate both at amateur as well as professional level. In challenge to win big rewards, finance, trophies and reputation, some players do not hesitate to use such illegal drugs and doping substances at their disposal to achieve their sports target to enhance sports performance (Alaranta *et al.*, 2006) [1]. While at International and national level various anti-doping agencies are working and made many strict regulations to control the doping they also put efforts are also put to make the athletes, coaches, teachers and sports promoters aware about doping and their consequence. As many cases of doping substances use sand methods have been reported in Punjab since last few years. Sportspersons belongs to different sports in Punjab implicated with doping have claimed lack of knowledge or awareness on doping substances. Ama *et al.* (2003) [2] conducted a study on African amateur footballers restrictedly in Yaounde, Camreroon. They investigated the uses and awareness of lawful and unlawful substances among athletes. Further, they pointed that footballers' knowledge about doping was vague. Few activities and an epidemiological study on doping among the footballers were recommended by them. Kamenju (2014) [11] identified the influence of demographics on Kenyain college pupil-teacher athletes about awareness, perception and attitude to performance-enhancing substance use in sports. He found inadequate knowledge of the college athletes and it was recommended that College athletes should be educated on doping in order to create awareness, change perceptions and their attitudes to performance-enhancing substance use in sports at all levels of competitions.

In ancient times, the participants of ancient Olympic games were required to take an oath along with their father, siblings and trainers for not to use illegal tactics to win (Bucher & Wuest, 1999) [5]. Graf-Baumann (2006) [8] explicated that athletes used special diets and stimulating portions to enhance performance. Cyclists and endurance athletes used substances such as caffeine, cocaine and alcohol in the nineteenth century. Insel and Roth (2002) [9] indicated doping as a problem that affects both male and female athletes of amateur as well as professional sports. Corbin *et al.* (2004) [6] indicated that 29% Of American football players,

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21% of men and 16% of women track athletes voluntarily admitted to having used performance-enhancing substances. While considering the above mentioned facts, it is required to concentrate on the reasons behind doping and how athletes' awareness, perception and attitude towards doping can be inclined for drug free sports. Astrand and Rodhal (2003) [4] revealed that athletes use drugs to guarantee better output, for finance gain and most importantly lack of awareness of the implications of doping. However, studies have pointed out that in-spite of doping awareness, some athletes are not fully prepared to avoid accidental and purposeful doping behavior (Lubna *et al.*, 2008) [12].

In order to protect players of Punjab as well as India from breaching the code of National Anti-Doping Agency (NADA) and World Anti-Doping Agency (WADA) intentionally or unintentionally, it is essential to educate or make them aware about doping issues. An indispensable aspect of doping prevention is the assessment of athlete's awareness of doping so as to influence on individuals orientation to doping in sports. An athlete who is aware of the negative effects of drugs is likely to change his attitude towards doping for better future. Keeping into consideration the harmful effects of doping on sportspersons' health and well-being and to deter them to face legal implications, an attempt has been made by

the researchers to assess the doping awareness among sports persons in Punjab state.

**Methodology**

A Sample of one thousand (N=1000) players from various sports i.e. handball, football, hockey, kabaddi (Punjab style) and kabaddi (National Style) from Punjab was selected for the present study. Out of 1000, two hundred (n=200) subjects were selected purposively from each game for present study. To obtain the required information on the variable i.e. doping awareness, the self-designed questionnaire on doping awareness was employed. The test of significance (One way ANOVA) was used to compare the means of different selected games with regards to doping awareness among sportspersons of Punjab. Scheffe's Post-hoc test was also applied to see the degree and direction of differences where 'F' value found significant. Descriptive statistics was also carried out. The level of significance was set at 0.05.

**Results**

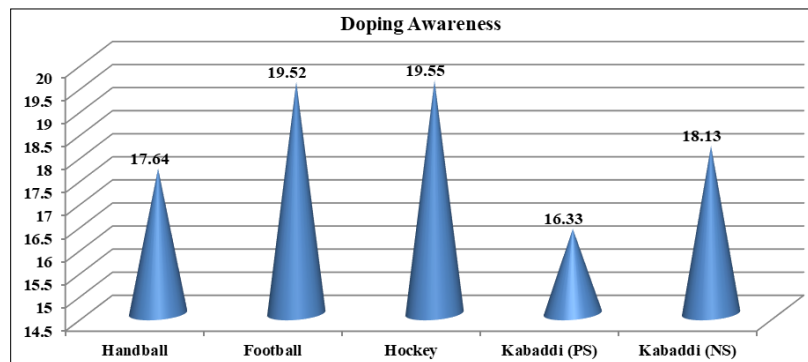
Descriptive statistics with regards to doping awareness among sports persons of Punjab with regard to different sports i.e. handball, football, hockey, kabaddi (Punjab Style) and kabaddi (National Style) has been presented in table-1.

**Table 1:** Descriptive Statistics of doping awareness among players of Punjab in relation to type of sports

Games	Hand Ball (n=200)		Football (n=200)		Hockey (n=200)		Kabaddi (PS) (n=200)		Kabaddi (NS) (n=200)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Doping Awareness	17.65	6.79	19.53	8.33	19.56	8.41	16.34	7.49	18.13	9.17

Table-1 shows that the Mean and SD values of players with regard to the variable doping awareness of various games; handball, football, hockey, kabaddi (NS) and kabaddi (PS) were

17.65±6.79,19.53±8.33,19.56±8.41,16.34±7.49and18.13±9.17 respectively.The graphical representation of mean scores of different games with regards to doping awareness has been depicted in figure-1.



**Fig 1:** Graphical representation of mean scores of different games with regard to doping awareness

The results of one way Analysis of Variance (ANOVA) to assess the Doping Awareness in relation to different games have been presented in Table-2.

**Table 2:** Analysis of Variance (ANOVA) results with regard to doping awareness among players of different games

	Sum of Squares	Df	Mean Square	F-value	p-value
Between Groups	1475.116	4	368.779	5.645*	.000
Within Groups	65004.240	995	65.331		
Total	66479.356	999			

\*Significant at 0.05 level F=0.05 (4,995)

It has been noticed from table-2 that statistically significant differences ( $p < 0.05$ ) existed among players of different games i.e. handball, football, hockey, kabaddi (National Style) and kabaddi (Punjab Style) of Punjab with regard to doping awareness. Since, the obtained 'F' ratio=5.645 and p-value (sig.). 000 were found statistically significant ( $p < .005$ ).To find out the degree and direction of differences between paired means with regards to doping awareness among players of different games, the Scheffe's Post-hoc test has been applied which has been presented in table-3.

**Table 3:** Significance of difference between paired means of the players of different games with regard to doping awareness

Variable	(I) Game	(J) Game	Mean Difference (I-J)	Std. Error	Sig.
Doping Awareness	Hand ball	Football	-1.880	.808	.249
		Hockey	-1.910	.808	.233
		Kabaddi (PS)	1.310	.808	.622
		Kabaddi (NS)	-.485	.808	.986
	Football	Hockey	-.030	.808	1.000
		Kabaddi (PS)	3.190*	.808	.004
		Kabaddi (NS)	1.395	.808	.562
	Hockey	Kabaddi (PS)	3.220*	.808	.003
		Kabaddi (NS)	1.425	.808	.540
	Kabaddi (PS)	Kabaddi (NS)	-1.795	.808	.295

\*Significant at 0.05 level

Table-3 shows that the mean difference between handball and football players was 1.880 with p-value (sig.) =.249. Statistically insignificant difference ( $p>0.05$ ) found between handball and football players with regard to the variable; doping awareness. However, while comparing the mean values of both groups, it has been noticed that the football players demonstrated insignificant high doping awareness as compared to the handball players of Punjab.

The mean difference between the handball and hockey players was 1.910 with p-value (sig.) =.233. Statistically insignificant difference ( $p>0.05$ ) found between handball and hockey players with regard to variable; doping awareness. However, while comparing the mean values of both groups, it has been noticed that the hockey players demonstrated insignificant high doping awareness as compared to the handball players of Punjab.

The mean difference between the handball and kabaddi (PS) players was 1.310 with p-value (sig.) =.622. Statistically insignificant difference ( $p>0.05$ ) found between handball and kabaddi (PS) players with regard to variable; doping awareness. However, while comparing the mean values of both groups, it has been noticed that the handball players demonstrated insignificantly high doping awareness as compared to the kabaddi (PS) players of Punjab.

The mean difference between the handball and kabaddi (NS) players was .485 with p-value (sig.) =.986. Statistically insignificant difference ( $p>0.05$ ) found between handball and kabaddi (NS) players with regard to variable; doping awareness. However, while comparing the mean values of both groups, it has been noticed that the kabaddi (NS) players demonstrated insignificantly better doping awareness as compared to the handball players of Punjab.

The mean difference between football and hockey players was .030 with p-value (sig.) = 1.000. Statistically insignificant difference ( $p>0.05$ ) found between football and hockey players with regard to the variable; doping awareness. However, while comparing the mean values of both groups, it has been noticed that the hockey players demonstrated insignificant better awareness than football players.

The mean difference between football and kabaddi (PS) players was 3.190 with p-value (sig.) =.004. Statistically significant difference ( $p<0.05$ ) found between football and kabaddi (PS) players of Punjab with regard to the variable; doping awareness. While comparing the mean values of both groups, it has been noticed that the football players demonstrated significantly high doping awareness as compared to the kabaddi (PS) players of Punjab.

The mean difference between football and kabaddi (NS) players was 1.395 with p-value (sig.) =.562. Statistically insignificant difference ( $p>0.05$ ) found between football and kabaddi (NS) players of Punjab with regard to the variable;

doping awareness. However, while comparing the mean values of both the groups, it has been noticed that the football players demonstrated insignificantly high doping awareness as compared to the kabaddi (NS) players of Punjab.

The mean difference between hockey and kabaddi (PS) players was 3.220 with p-value (sig.) =.003. Statistically significant difference ( $p<0.05$ ) found between hockey and kabaddi (PS) players of Punjab with regard to the variable; doping awareness. While comparing the mean values of both the groups, it has been noticed that the hockey players demonstrated significantly high doping awareness as compared to the kabaddi (PS) players of Punjab.

The mean difference between hockey and kabaddi (NS) players was 1.425 with p-value of (sig.) =.540. Statistically insignificant ( $p>0.05$ ) difference found between hockey and kabaddi (NS) players of Punjab with regard to variable; doping awareness. However, while comparing the mean values of both the groups, it has been noticed that hockey players demonstrated insignificantly high doping awareness as compared to the kabaddi (NS) players of Punjab.

The mean difference between kabaddi (PS) and kabaddi (NS) players was 1.795 with p-value of (sig.) =.295. Statistically insignificant ( $p>0.05$ ) difference found between kabaddi (PS) and kabaddi (NS) players of Punjab with regard to variable; doping awareness. However, while comparing the mean values of both the group it has been noticed that kabaddi (NS) players demonstrated significantly high doping awareness as compared to the kabaddi (PS) players of Punjab.

### Discussion

It has been noticed from table-2 that statistically significant differences were existed among different sports i.e. was handball, football, hockey, kabaddi (PS) and Kabaddi (NS) players of Punjab with regard to doping awareness. Football players demonstrated significantly high doping awareness as compared to their counterparts' kabaddi (PS) players of Punjab. Similarly the hockey players also demonstrated significantly high level of doping awareness when compared with kabaddi (PS) of Punjab. Further, it has also been noticed that the kabaddi (PS) players have demonstrated low level of doping awareness when compared with the groups in question. The outcomes of the study might be due to the fact that the kabaddi (PS) is an indigenous game and mostly played in the rural areas of Punjab. Even, Kabaddi (PS) is yet not been recognized by the International Olympic Committee (IOC) kabaddi (PS) players do not possess in-depth knowledge about doping as compared to the players of other disciplines. Therefore, the kabaddi (PS) players are least aware about doping. Secondly, the football and hockey being most popular sports in the world and their players have exhibited significantly better doping awareness than the

players of other games. Results of the study conducted by Kamenju (2014) <sup>[11]</sup> revealed similar results by indicating significant differences between different types of sports namely; track and field and ball games players. However, study conducted by Feinberg (2009) <sup>[7]</sup> on polish athletes indicated low awareness among athletes. Ama *et al.* (2003) <sup>[2]</sup> also revealed that the knowledge of doping awareness among Cameroonian soccer players was vague and insufficient.

### Conclusions

It is concluded that football and hockey players of Punjab state demonstrated significantly better doping awareness when compared with the kabaddi (PS) players'. While comparing the mean values of all the groups, it is concluded that hockey group has exhibited better doping awareness followed by football, kabaddi (NS) and handball. However, the kabaddi (PS) players have demonstrated low level of doping awareness when compared with all other groups.

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