A study of anxiety physical and performance variable of women hockey Players of Jammu and Kashmir

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Abstract

Sports serve vital social and cultural functions, the importance of which can hardly be exaggerated. The contribution of sports towards overall welfare of the human society may be capsule in the following points. Sports help in the all round development of human body and it provides ample and healthy means for recreation and relaxations of human mind and body. Sports are effective for rehabilitation and social adjustment for injured, sick and handicapped. Sports provide opportunities for social interactions there by fostering peace and understanding among different people, nations, races, religions etc. Sports also perform preventive and curative functions for several diseases and ailments inflicting human body and mind. "Sports provide healthy and socially acceptable opportunities for the people and nations to compete against each other there by touching heights of excellence of human endeavor and attainment. In the present study the researcher fitness of women hokey players of Jammu and Kashmir.

Key words:- sports, social culture, excellence of human endeavor

Introduction

Hockey was introduced in India by the British during 3rd quarter of 18th century. In the early years hockey game was confined almost exclusively to British and Indian Sepoys. The nurseries of Indian hockey were the hundreds of cantonments in the country, where it was almost the only main sports of Indian soldiers.

The birth of Indian hockey, as far as civilians are concerned dates back to 1885, when the first hockey clubs were formed in Calcutta and Bombay. The first national tournament was the Brighton Cup Tournament in Calcutta in the year 1895. The next year the Aga Khan tournament was started in Bombay. Later on Punjab

took lead in hockey in a big way and from the soldiers it spread to the educational institutions and was included in the Punjab University sports tournaments in 1903. Likewise Bengal Hockey Association in 1908, and army sports control board in 1919 were started. The first hockey club came up in Calcutta in 1885-86 and soon Bombay and Punjab followed suit. Making its Olympic debut at the 1928 Amsterdam Games, Indian hockey team cruised home to its first Olympic gold, without conceding a single goal. The hallmark of this ruthless domination was the wizardry of Indian hockey legend - Dhyan Chand, who mesmerized the Amsterdam crowd with his dazzling skills. From 1928 to 1956, the Indian hockey juggernaut won six straight Olympic gold medals, while winning 24 consecutive matches. During this time, India scored 178 goals conceding only 7 in the process. This was the golden era of Indian hockey, when India loomed large in world hockey and produced some of the finest players the game has ever seen. During this dominance, one name that clearly comes to mind is Balbir Singh. For almost three decades, Indian team had about five players with the same name. The first Balbir Singh played with the great Indian teams of 1948, 1952 and 1956. He reached the pinnacle of success at Helsinki in 1952 when he scored five goals in a 6-1 gold medal victory over the Netherlands.

The Indian stranglehold over the Olympic hockey gold came to an end, when Pakistan defeated India in the final of the 1960 Rome Olympics. However, the record created by India is likely to stand strong through ages, as no other country has ever managed to come close to it, leave about beating it. Talking about some of the legendary and outstanding players of Indian hockey, Dhyan Chand, K.D. Singh, Dhanraj Pillay and Dilip Tirkey are some names that come to mind instantly. Thanks to their exceptional gaming 10 techniques and enduring enthusiasm, the position of India in the field of hockey achieved new heights.

Importance of physical variables in hockey

Good performance in hockey game not only depends upon the level of competency over the fundamental skills but also depends upon a number of other factors. Paramount important among the various other factors is the physical variables. Physical variables include the physical structure and fitness a combination of many characteristics bestowed upon the physique, namely, strength, speed, speed endurance etc. In the words of HardayalSingh(1995) "Physical fitness or condition is the sum of five motor abilities namely, strength, endurance, flexibility and co-coordinative abilities", these motor abilities and their complex form are the basic pre requisites for human motor actions.

Though a number of physical variables influence the performance the scholar selected the following for the study.

• Speed

• Agility

• Speed Endurance

• Arm Strength

• Leg strength

• Abdominal Strength

Objectives of Study

1. The study sought to compare and analyze the physical variables of the women hockey players playing at varied sessions.

2. The study sought to compare and analyze the performance variables of women hockey players playing at varied sessions.

3. The study sought to compare and analyze the Total Performance of women hockey players playing at varied sessions.

4. The study sought to know the difference among the women hockey players having different span of experience in their anxiety, physical and performance variables.

Hypotheses of the Study

In order to achieve the objectives of the study five main hypotheses and nineteen sub hypotheses were formulated.

1. There is no significant difference in the physical variables of Women hockey players playing at varied sessions.

2. There is no significant difference in the performance Variables of women hockey players playing at varied sessions.

3. There is no significant difference in the Total performance of women Hockey players playing at varied sessions. -

4. There is no significant difference among tine women hockey players living different length of experience in their anxiety, physical and performance variables.

REVIEW OF RELATED LITERATURE

The literature in any field forms the foundation upon all future work will be built. The investigator has made honest and scholarly attempt to locate a number of researches of similar study by various scholars. The investigator has taken great endeavor to collect the relevant and critical literature supporting the study. In the present chapter the review of literature related to hockey and other games are presented. The chapter has been divided into two sections, first section contains the literature related to Physical and Performance variables of field hockey and the latter deals with anxiety related literature.

Literature related to Physical and Performance variables Good performance in hockey game not only depends upon the level of competency over the fundamental skills but also depends upon a number of other factors. Paramount important among the various other factors is the physical and performance variables. In this section some of the studies related to Physical and Performance variables related to Hockey and other games are presented.

Manna, G.L. Khanna P.C and Dhara (2010) in their study aimed to find out the variation of age and training on biochemical variables of Indian elite hockey players. A total of 120 hockey players who volunteered for the present study, were equally divided (n=30) into 4 groups: under 16 years (14-15 yrs);under 19 years (16-18 yrs); under 23 years (19-22 yrs); and senior (23-30 yrs). The training sessions were divided into 3 pliases: Transition Phase (TP), Preparatory Phase (PP), and Competitive Phase (CP). The training prograннme consisted of aerobic, anaerobic and sl<ill training; and completed 4 hours in morning and evening sessions, 5 days/week. Selected biochemical parameters were measured and data were analyzed by applying Two-wayANOVA and Post hoc test. The mean values of haemoglobin (Hb), total cholesterol (TC),triglyceride (TG), high density lipoprotein cholesterol (HDL-C) and low density lipoprotein cholesterol (LDL-C) have been increased significantly with the advancement of age of players. A significant increase in serum urea, uric acid and HDL-C and a significant decrease in Hb, TC, TG and LDL-C have been noted in PP and CP when compared to that of TP. The present study would provide useful information for biochemical monitoring of training of hockey players.

A comparative study was conducted by Kanwaljeet, Singh, Kanwar Singh and Mandeep Singh (2010) to determine the anthropometric measurements and body composition of field hockey teams of India, Pakistan and Sri Lanka. A total of 53 field hockey players from three teams were studied. The participants' height was measured using the standard anthropometric rod, while their weight was measured with a portable weighing machine. Widths and diameters of body parts were measured using digital caliper. Girths and lengths were taken with a steel tape. Grip strength was measured with a hand dynamometer. Skinfold thickness measurements were taken using the Harpenden caliper at 4 sites (biceps, triceps, subscapular and suprailliac). The percentage of fat was calculated from the sum of 4 measurements of skinfold thickness. It was found that there were no significant differences in height and weight among the three teams, with the Pakistani players recording a slightly higher weight. The Pakistan team had a significantly higher upper arm length and bi-humerus diameter as compared to the India and the Sri Lanka teams. The Sri Lanka team had significantly less wrist circumference hand width and lean body mass as compared to the India and the Pakistan teams. The India team had significantly less % body fat than the other two teams. More data would be of interest to document the changes in anthropometry and body composition during the season and out of season and also to attempt an analysis of characteristics specific to field positions.

Elferink, Gemser, C. Visscher, M. A. J van Duijn, and K A P M Lemmink (2005) have done a study with the objective to gain more insight into the mechanisms that underlie the development of interval endurance capacity in talented youth field hockey players in the 12-19 age band. A total of 377 measurements were taken over three years. A longitudinal model for interval endurance capacity was developed using the multilevel

modelling program. With the model, scores on the interval shuttle run test can be predicted for elite and sub-elite male and female field hockey players aged 12-19 years. The model was significantly improved by including differential effects of performance level for age and sex. A negative effect was found for percentage body fat, and positive effects for additional training and motivation. The study also concluded that during adolescence, both male and female elite hockey players show a more promising development pattern of interval endurance capacity than sub-elite youtfi players. Percentage body fat, additional training hours and motivation influence this development. However, differences between the individual players are still considerable.

METHODOLOGY OF THE STUDY

In the present chapter the nature, sample, variables and the tools used in the study are presented.

Nature of the Study

The study is descriptive in nature. The normative Survey method was used to collect the data. The study aimed at studying the Anxiety, Physical and performance variables of women hockey players playing at varied playing sessions.

Sample of the Study

The sample of the study was selected through random sampling technique. The total number of 126 women hockey players belonging to different districts of jummu and Kashmir State were considered. Women hockey players in the age group of 14 to 25 years participated in the State Level Dasara Sports Competition and Dyanchand Invitation Hockey Tournament at mysore were selected as subjects.

Selection of the Subjects

The subjects for the study were selected from eight teams from Jammu and Kashmir State. The details of the subjects selected are given in the table.

Table 1.1: Details of the Sample of the Study

S.NO	Name of the teams	Name of the players
01	Jammu district hokey team	16
02	Udhampur district hokey team	16
03	Dooda district hokey team	16
04	Rojouri district hokey team	16
05	Ramban district hokey team	16
06	Srinagar district hokey team	16
07	Budgam district hokey team	16
08	Ganderbal district hokey team	14
	Total	126

Analyses of the study

1.2 Analysis of Physical variables

The physical variables selected for the study were Abdominal Strength, Agility, leg strength, Speed, Arm Strength and Speed Endurance. In order to test the hypothesis of the study, four Hypotheses were formulated and the difference in each physical variable of Women Hockey players playing at varied sessions was tested to find the significant difference. The details of the hypotheses testing are given below.

4.1 Hypothesis 1.There is no significant difference in the Physical variables of Women Hockey players playing at varied sessions.

Table 4.2.Results of one Way Analysis for Abdominal Strength (Sit ups)

Abdominal strength	Mean		Sum of Squares	df	Mean Square	F value	Result
Morning	41.1587	Between groups	18.370	2	9.185	.272	Not significant at 0.05 level
Afternoons	40.7460	Within	8438.963	250	33.756	.272	Do
Evening	41.2540	Groups	Do	250	33.756	.272	Do

From the table 4.1 it was found that the obtained 'F' value .272 was lesser than the table 'F' vale at desired level of significance 0.05 level. So the null hypothesis was accepted and it was concluded that the sit ups for abdominal strength of women Hockey players was equal on all the three times.

1.3. Analysis of Performance variables

The Performance variables selected for the study were Hitting/Goal Shooting, Dribbling, Pushing and Push-Pass. In order to test the hypothesis of the study four sub Hypotheses were formulated and the difference in the execution of each Performance variable of Women Hockey players playing at varied sessions was tested to find the significant difference. The details of the hypotheses testing are given below.

1.4. Hypothesis 2: There is no significant difference in the execution of performance variables of women hockey players playing at varied sessions.

Table 1.4.Results of one Way Analysis for Hitting at Goal/Goal Shooting

Hitting /goal / shooting	mean		Df	Mean square	F value	Results
Morning	5.6111	Between groups	2	7.193	2.826	Significant at 0.05 level
Afternoon	5.4921	Within groups	250	2.545	2.826	Significant at 0.05 level
Evening	5.1508		250	2.545	2.826	Significant at 0.05 level

The results of one way analysis of variance in the table 4.2 on the performance of goal shooting ability of the subjects during morning, afternoon and evening session show that there was insignificant difference in the performance of Goal shooting of Women Hockey players; It was found that the obtained 'F' value 2.826 was significant at 0.05 level. Thus null hypothesis was rejected and it was concluded that there is significant difference in the execution of Hitting at Goal/Goal Shooting of Women

1.5. Analysis of the data related to Total Performance

1.5 Hypotheses 3: There is no significant difference in the Total performance of Women Hockey players playing at varied sessions.

Table 4.3.Results of one Way Analysis for Total Performance

Total performance	Mean		DF	Mean square	F value	Results
Morning	70.8810	Between groups	2	7579.066	98.461	Significant at 0.01 level
Afternoon	57.5317	Within groups	250	76.975	98.461	Significant at 0.01 level
Evening	71.0476		250	76.975	98.461	Significant at 0.01 level

From the Anova table 4.3, it was found that obtained 'F' value 98.461 was greater than the table value at 0.01 level of significance which showed significant difference in the total performance of the subjects, Hence the null hypothesis was rejected and it was concluded that there is significant difference in the Total performance of subjects during morning, evening and afternoon timings

1.6. Analysis of the data to find the difference between the women

Hockey players with different experience background in their Anxiety, Physical and Performance variables.

In order to test the hypothesis of the study, three sub Hypotheses were formulated and the difference in the execution of each variable of Women Hockey players playing at varied sessions was tested to find the significant difference. The details of the hypotheses testing are given below.

4.4. Hypothesis 4: There is no significant difference among the women hockey players having different length of experience in their anxiety, physical and performance variables

Table 1.6 Results of the test for length of Experience and Anxiety

Experience	N	Mean	S.D	DF	t.value	Result
1-5 years	91	5.5714	12.885660	124	1.568	Not significant at 0.05 level
6-10 years	35	59.7143	14.35592	124	1.568	Not significant at 0.05 level

As it is indicated in the table 4.4, the obtained' value 1.568 was not significant at 0.05 level. So the null hypothesis was accepted and it was concluded that there is no significant difference between the women hockey players having different length of experience in their anxiety.

Summary

It is the established fact that sports play an important role in the development of integrated human personality, fostering understanding among different people, race in sports. Some individuals inherently possess the predetermined genetics suited to succeed in sport. These individuals do not put a great deal of time and effort into enhancing their sports achievement. Currently there is a shift towards putting more emphasis of scientific conditioning methods to accelerate development and optimize performance. Today, even the world's best players look to exploit everything within their control to gain a competitive edge. If the players hope to

optimize their supports technique and game performance, they must first develop the physical tools that will allow them to successfully integrate their physical and performance traits into their game. This is the fulfilling part of training to be in tune to their body accelerating their development and teaching them how to produce superior skill and game performance. In India Hockey which is regarded as national game has become popular among women. Good performance in hockey game not only depends upon the level of competency but also on physical and performance variables and the extent of competitive anxiety among the players With this background that the present study has been taken up

The study was descriptive in nature. It aims at studying the Anxiety Physical and Performance variables of women hockey players. The total number of 126 women hockey players belonging to different districts of jummu and kashmir State were considered. Women hockey players in the age group of 14 to 25 years participated in the Dasara Sports Competition and Dyanchand Invitation Hockey Tournament were selected as subjects.

Conclusions

1. There is no significant difference in the abdominal strength of women hockey players pliaying at varied sessions.

2. There is significant difference in the Agility of women hockey players playing at varied sessions.

3. There is no significant difference in the leg strength of women hockey players playing at varied sessions .

4. There is significant difference in the speed of women hockey players playing at varied sessions.

5. There is significant difference in the Arm strength of women hockey players playing at varied sessions.

6. There is significant difference in the Speed Endurance of women hockey players playing at varied session.

7. There is significant difference in the Hitting at Goal/Goal shooting of women hockey players playing at varied sessions.

8. There is significant difference in the Dribbling of women hockey players playing at varied sessions.

9. There is no significant difference in the Push test of women hockey players playing at varied sessions.

10.There is significant difference in the Push Pass test of women hockey players playing at varied sessions.

11. There is no significant difference among the women hockey players having different length of experience in their anxiety.

12. There is no significant difference among the women hockey players having different length of experience in their physical variables.

13. There is no significant difference among the women hockey players having different length of experience in their performance variables.

14.There is no significant difference among the women hockey players having different status in their anxiety.

15. There is significant difference among the women hockey players having different status in their physical variables.

16. There is significant difference among the women hockey players having different status in their performance variables.

17. There is no significant difference among the women hockey players of different age group in their anxiety.

18. There is significant difference among the women hockey players of different age group in their physical variables.

19. There is significant difference among the women hockey players of different age group in their performance variables.

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