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## **A STUDY OF SPORTS INFRASTRUCTURE IN COLLEGES FOR WOMEN AFFILIATED TO GURU NANAK DEV UNIVERSITY, AMRITSAR, INDIA**

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### **ABSTRACT**

Guru Nanak Dev University has occupied a unique place in the Indian Universities by winning Maulana Abul Kalam Azad (MAKA) Trophy for record 21 times. To investigate its unparalleled achievements in sports, relevant data for the study was collected from 27 colleges for women affiliated to Guru Nanak Dev University, Amritsar, India. A standardized questionnaire was used for data collection. Information regarding number of physical education teacher and coaches, total point/sports performance, ground staff, play fields, total budget/expenditure on sports, total number of sports person's participation in inter-college tournaments and total strength of students of the colleges were collected which were taken as independent variables, sports performance of respective college was treated as dependent variable. The colleges under study are spread over five districts in Punjab, i.e. Gurdaspur, Amritsar, Jalandhar, Kapurthala and Nawansahar, correlation and step wise regression equation was used to analyse the data. The results of present study indicated that the budget/expenditure incurred on sports in the colleges was the most important factor which can be held responsible for achievement in sports performance of the college in sports arena.

**Keywords:** MAKA trophy, sports performance, budget/expenditure.

### **INTRODUCTION**

The sports accomplishments can be attributed to many factors working in a whole some manner to compound an ideal amalgam of training methodology, psychological factors and to cap it all the much needed sports facilities. The high-level performance rest largely upon their different abilities coupled with sports facilities, which plays a decisive role in achieving higher level performance in sports. When all other abilities compound

at the peak level, the winning of laurels in competitions also depend upon the facilities one had been enjoying in the sports syndrome. It is becoming all the more imperative to specify these sports facilities and characteristic in specifics sports categories urgently required in the women college falling under the domain of Guru Nanak Dev University, Amritsar. Guru Nanak Dev University was established at Amritsar, India on November 24, 1969 to commemorate Guru Nanak Dev's birth quincentenary celebrations. Guru Nanak Dev University campus is spread over 500 acres near village of Kot

Khalsa, nearly 8 km west of the Amritsar City on Amritsar - Lahore national highway. The University, which can take pride and boast of having annexed Maulana Abul Kalam Azad trophy for creditable, 21 times, claiming runner-up position, 12 times and attaining 3<sup>rd</sup> position twice. The "Maulana Abul Kalam Azad (MAKA) Trophy" is given to overall top performing University in Inter-University tournaments of the preceding year. Government of India instituted 'Maulana Abul Kalam Azad (MAKA) Trophy' award in 1956-57. The overall top performing university in the Inter-University tournaments is conferred with Maulana Abul Kalam Azad (MAKA) Trophy, which is a rolling trophy along with a cash prize of Rs.10 lakh. Universities securing second and third positions are also provided with cash prize of Rs.5 lakh and Rs.3 lakh, respectively. It is an unenviable position ever matched by any universities within Indian Union. The affiliated college who contribute their full might in pinnacled excellence and capabilities play the pivotal role in the development and excellence of sports. On the basis of the performance in Inter-college tournaments, various universities team are selected for participation in Inter universities competitions.

Some of researchers have conducted the studies related to the infrastructure of sports in schools, colleges and sports of different states of India (Walia, 1971; Khatri, 1974; Singh, 1967 and Jaisy, 1963). Walia had undertaken a survey of facilities of physical education and sports for the students of Higher Secondary Schools of Delhi State in 1971, and found that most of the schools did not have sufficient equipment for students to develop their sports. Lack of sports funds, equipment grounds was severely felt in schools. Sports fund was used in majority of schools for the purposes other than sports. Even whatever little was provided by the

Government in budget was not properly utilized. Singh (1976) made a survey entitled "Critical Evaluation of Sports Facilities available in the college of Punjab State." He had concluded that the shortage of women physical education teachers was more than the male physical education teachers. Under-qualified physical education teachers had been employed in most of the colleges. Sixty five colleges out of seventy three respondent colleges fell short of 576 acres giving an average shortage of 9.3 acres play area per college. The position of developed play fields in affiliated colleges of Punjab University was better than that of colleges in the other universities of Punjab.

There are number of mind boggling queries regarding the sports infrastructure in educational institutions affiliated to Guru Nanak Dev University, Amritsar. The study was planned to execute and highlight some dormant characteristics regarding infrastructure facilities etc., which cry for the light. Experts in the field, senior physical education teachers working in the colleges and the coaches was consulted to note down the variables which more supposed to effect sports performance of the colleges. The objective of this study was to find out the factors affecting sports performance of the colleges for women affiliated to Guru Nanak Dev University, Amritsar, India.

## **METHODOLOGY**

### **SAMPLE**

Sample of the study in hand was affiliated to Guru Nanak Dev University, Amritsar, India. In this study 27 colleges for women affiliated to Guru Nanak Dev University were selected. It is pertinent to mention here that the sake of competition to provide level ground for the colleges they were divided into 'A' and 'B' categories by the university. The college with strength upto 700 was placed in the 'B' category. The

competitions are arranged within its own category. Similarly, the colleges above the strength of 700 are placed in the 'A' category and they compete within themselves. The period over which this data is collected was spread over four sessions ranging from 1996 to 2000. The colleges under the study were those who got affiliation to the university between 1996 to 2000. The institutions that came into existence after 2000 were not involved in the study.

### DATA COLLECTION

A questionnaire was prepared, standardized and sent to the colleges involved in the study. Information related to physical education teacher and coaches, total point/performance, ground staff, play fields, total budget/expenditure incurred on sports, total number of sports person's

participation in inter-college tournaments and total strength of students in the colleges was requested from the colleges concerned. The researcher personally visited the colleges to have first hand information. All the questionnaire was returned duly filled in and hence there were hundred percent returns. Information regarding number of physical education teacher and coaches, total point/sports performance, ground staff, play fields, total budget/expenditure on sports, total number of sports person's participation in inter-college tournaments and total strength of students of the colleges were collected which were taken as independent variables, sports performance of respective college was treated as dependent variable. The variables used for study are shown in Table 1.

**Table 1: Table showing variables under study**

No.	Name
1.	Physical Education Teachers and Coaches
2.	Total Point / Performance
3.	Ground Staff
4.	Play Fields
5.	Total Budget / Expenditure
6.	Total Sports person's participation in Inter- college tournaments
7.	Total Strength of Students in the Colleges

### STATISTICAL ANALYSIS

Correlation and step wise regression equation was used to elicit findings. The equation used is as follows:-

$$F = \frac{R^2 / M}{(1-R^2) (N-M-1)}$$

(M = No. of variables)  
(N = Sample of size)

F is calculated to know the significance of  $R^2$

$$F = \frac{R_1^2 - R_2^2}{1 - R_1^2 / N-M-1}$$

F is calculated to know the significance of change in  $R^2$

## RESULTS AND DISCUSSION

The data collected relates to colleges affiliated to Guru Nanak Dev University of Women colleges only from 1996-2000. The

number of such colleges is 27. There district wise distribution is given in Table No. 2.

**Table No – 2** District wise distribution of women colleges

NAME OF DISTRICT	NO. OF COLLEGE
Gurdaspur	06
Amritsar	07
Jalanadhar	08
Kapurthala	05
Nawansahar	01
Total	27

Table No.2 indicates the maximum number of colleges exist in Jalandhar district with eight colleges, including 'A' & 'B' division together. The district of Amritsar has six colleges both in 'A' & 'B' division are added together. The Gurdaspur district has seven and Kapurthala district has five colleges, each including 'A' and 'B' division categories. The new district Nawansahar was cut out of Jalandhar district and has only one college which falls in 'B' division category. Further analysis of data of Female colleges as shown in Table No.- 3. For knowing the

performance effecting colleges from the independent variable included in the study. Multiple regression analysis was used. The regression equation is given below.

### REGRESSION EQUATION:

**Performance** =  $-1.911 + 0.0253(\text{Physical Education Teacher \& Coaches}) - 0.540(\text{Ground staff}) + 0.142(\text{Play Fields}) + 0.0001(\text{Total Budget}) + 0.123(\text{Total Sportspersons participation in Inter-colleges tournaments}) - 0.00181(\text{Total Strength of students in the Colleges})$ .

**Table:3** showing correlation of Independent Variables (IV) with Dependent Variable (DV)

Sr. No	Name	No of IVs	Correlation with DV
1	Physical Education Teachers and Coaches	1	.59
2	Ground Staff	3	.12
3	Play Fields	4	.77
4	Total Budget / Expenditure	5	.97
5	Total Sportsperson's participation in Inter- college tournaments	6	.93
6	Total Strength of Students in the Colleges	7	.80

The above Table No. 3 shows the correlation of Independent Variables with the Dependent Variables, which is sports performance. To have total picture of the

above relationship, detailed stepwise regression analysis is used, and the findings are shown in Table No. 4

**Table No. 4 Finding of stepwise regression analysis**

No. of Variables	Variable Deleted	R <sup>2</sup>	R <sup>2</sup> Change	F	Level of Significance/ Non Significance
6	Nil	0.97	--	450.75	0.01 ✓
5	3	0.97	0.00	0.665	NS
4	1	0.97	0.00	0.0003	NS
3	4	0.97	0.00	1.483	NS
2	7	0.96	0.01	12.822	0.05 ✓
1	6	0.94	0.02	56.590	0.05 ✓
1 [Total Budget]	Nil	0.94	--	1706.889	0.05 ✓

✓ **Stands for Significance**  
 NS **Stands for Non- Significance**

Result of stepwise regression analysis of data is related to women colleges affiliated to Guru Nanak Dev University from its five district in given in Table No. - 4. This shows the contribution of different variables related to overall performance of sports, which is dependent variable. The distribution of Independent Variable related to performance in ascending order is displayed and the value of R<sup>2</sup>. This value is 0.97, when all the Independent Variables are included in the analysis. This value shows that almost 97% performance of the colleges can be responsible for the given Independent Variable, which we have added. These Independent Variables have already been shown in Table No. – 3 with their correlation with dependent variable as shown against each.

Scrutinizing the R<sup>2</sup> value, the Independent Variables are deleted one by one in the ascending order of their importance and the consequent change in R<sup>2</sup> is noted. These results are also added in the Table No. - 4. The first variable to be deleted is Ground staff (No.3), after the deletion of this variable the value of R<sup>2</sup> is 0.97. This means even after deletion of this variable the contribution of Independent Variables remains at 97%. The value of F is calculated and comes out 0.665. This value

of F is found to be insignificant at 0.01 level of significance. The significant change in the value of shows its relative significance in determining the sports performance of the colleges. The next variable deleted was Physical Education Teacher & Coaches. There is still no change in the value of R<sup>2</sup> (0.97). This indicates the relative insignificant contribution of this variable in the sports performance of the colleges. Similarly the variables no. 4, whose value is 0.97 has no significance contribution towards the Dependent Variable i.e. Sports performance. The analysis further brings to light that variable no. 7 and 6, which are Total Strength of students in the college and Total number of sportspersons participation in Inter Colleges Tournaments are with the value of R<sup>2</sup> 0.96 and 0.94 respectively. The calculating of F(R<sup>2</sup> change) is found to be significant at 0.05 level of significance.

The last variable i.e. Total Budget / Expenditure has R<sup>2</sup> of 0.97. That shows that there 97% contribution of this variable towards performance of the women colleges of the University. The R<sup>2</sup> change calculated value is 1706.88, which significant at 0.05 level of significance. The women colleges there are three

Independent Variable no. 7, 6 and 5 which have shown significant contribution towards the sports performance of the colleges. These variables are Total strength of students in the colleges, Total number of sportspersons participation in Inter Colleges Tournaments and Total Budget / Expenditure, which is spent on sports promotion and competitions. It can be construed from the analysis that those colleges having more number of students shall participate in more sports and games Inter college competition of the University. Some of the Women colleges do not participate in many of the sports competitions. When fewer teams are seen entering the competitions. Sometimes there are only 3 – 4 teams participating in the women section. This implies that for better performance more women students be encouraged to participate in sports.

### CONCLUSION

The results revealed that those colleges having more number of students shall participate in more sports and games in inter college's competition of the university. Some female colleges do not participate in many of the sports tournaments when fewer teams are seen entering the tournaments. Sometimes there are only three to four teams participating in the women section. This shows that for better performance more female students be motivated to participate in sports. It has also be seen that total strength of students in the colleges and total number of sports women participating in sports are other two variables significantly contributing to the overall sports performance of the college in

credit to the budget/expenditure. The results of present study showed that the budget/expenditure incurred on sports in the colleges play the most important role in the performance of the college in sports arena.

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