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Dr. Amandeep Singh

Assistant Professor, Akal College
of Physical Education, Mastuana
Sahib, Sangrur, Punjab, India

Impact of aggression on stress among college level team and individual game players of Punjab

Dr. Amandeep Singh

Abstract

The aim of the study is to find out the impact of aggression on stress among college level team and individual game players of Punjab. For this purpose 100 team and 100 individual game players at college level were selected randomly. For the study Aggression Inventory (AI) developed by Dr. M.K. Sultania and Stress scale (ADSS) developed by BSPSA was used. As the purpose of the investigation was to find out the difference between experimental variance of independent groups, "t" test was used. Further, these three groups (in case of both team and individual sports separately) were made equal in term of no. of sportsperson in each group by making use of lottery method. After applying, lottery method, each group comprised of 13 sportspersons. Then onward, F-test (one way ANOVA) was applied on stress scores for each three aggression level groups separately for team and individual sports. Further, if the F-value came out to be significant, least significant difference (LSDs) were computed at 0.05 and 0.01 level of significance, for df 36. The result of study revealed that team and individual game players of colleges do not differ significantly from each other with respect to their aggression level. The team and individual game players of colleges differ significantly from each other with respect to their stress. The aggression level of team players of colleges significantly influenced their stress. Team game players of colleges with their high and moderate aggression level significantly possessed high stress as compared to team game players with low aggression level. However, there existed no significant difference in mean stress score of team game players of colleges with high and moderate aggression level. The aggression level of individual game players of colleges significantly influenced their stress. Individual game players of colleges with either high or moderate aggression level significantly possessed high stress as compared to individual game players with low aggression level. However, there existed no significant difference in mean stress scores of individual game players of colleges with high, moderate and low aggression level.

Keywords: Aggression, individual, ANOVA, LSDs, ADSS

Introduction

Sports competition without aggression is a body without soul. Competition and aggression are Twins. There is clear evidence that, in general, aggression in more boisterous games may help in performance because it arouses players overtly to put in harder efforts, and keeps them motivated to do and die for the success of the team. Contrarily, aggression committed by player in certain contexts, situations or positions (e.g. defensive players) may impede performance of individual skill as well as success of the team. This paradoxical view may be attributed to differences in individuals and the game situations. The intensity of aggression manifested by players in sports or a particular match may greatly depend on the prevailing circumstances and ground realities i.e. the same individuals behaving much more aggressively in one situation but not in other. Cratty (1989) very apply point out that aggression that and athlete may admit to be experiencing may be influenced by combination of factors, including role perceptions. The manner in which aggression interacts with skill, the folklore surrounding the sport

Stress is an integral part of quality of life; it is needed to produce energy and excitement in our lives. However, too much or too little stress is undesirable and in these conditions people may develop symptoms such as anxiety, irritability, sleeplessness or muscle tension, Although many people talk about stress and 'being stressed' it is actually a difficult term to define. In general terms it is a concept meaning something that produces strain. Stress can also be viewed as a complex process where events and individual reactions to events interplay to

Correspondence

Dr. Amandeep Singh

Assistant Professor, Akal College
of Physical Education, Mastuana
Sahib, Sangrur, Punjab, India

produce physical and mental responses.

‘Stress is a psycho-physical phenomenon that leads to weakening in the psychological state of the individual, causing deterioration in activity or an increase in the psycho-physical exertion necessary per unit of performance’. (Schellenberger’90).

In the field of sports, psychologists, coaches, athletes and sports administrators have become more interested in studying the negative aspects of stress that affects the performance of athletes in competitive situations. Research revealed that an optimal level of stress is necessary for performing certain sports task efficiently but, too much stress (i.e. hyper stress) adversely affects the performance.

Objectives

1. To study the difference in aggression between team and individual players of colleges.
2. To study the difference in stress of team players of colleges possessing different aggression level.
3. To study the difference in stress of individual players of colleges possessing different aggression level.
4. To study the difference in stress between team and individual players of colleges.

Selection of subjects

The objective of present investigation was to study the impact of aggression on stress among college level individual and team game players of Punjab. For this purpose 100 individual and 100 team game players at college level were selected randomly.

Selection of variable

Psychological variables i.e. aggression and stress were used for present study.

Aggression Inventory (AI)

The Hindi adaptation of aggression inventory developed by Dr. M.K. Sultania was used to measure the aggression level of team and individual players of colleges. The inventory includes 59 items that measure hostility and 8 items measure guilt.

Stress

The Hindi version of stress scale developed by BSPSA was used to collect data regarding stress of team and individual players of colleges.

Procedure

After greeting the subjects they were told to be frank and trustful in their answers, then the set of two questionnaires i.e. aggression inventory and stress scale were given to each student in same order.

Statistical technique used

The value of obtained “t” was evaluated with the degree of freedom at .05 and .01 level of significance. For this, reason was that in psychological and educational circles, the 5 percent (.05) alpha and one percent (.01) alpha levels of significance are often used as standards for rejection/acceptance.

In addition to this, for studying the difference in stress of college level sports persons possessing different levels of aggression, the statistical technique of “Analysis of Variance (one way)” was applied. Before applying this technique, the sampled college students were divided into following three

groups on the basis of their aggression scores by employing the formula of M+-1 S.D.

- A. For Team Sports (Mean = 32.44, S.D. = 7.269)
 - High Aggression Level Group (40 and above)
 - Moderate Aggression Level Group (26 to 39)
 - Low Aggression Level Group (25 and below)
- B. For Individual Sports (Mean = 33.80, S.D. = 6.47)
 - High Aggression Level Group (41 and above)
 - Moderate Aggression Level Group (28 to 40)
 - Low Aggression Level Group (27 and below)

Further, these three groups (in case of both team and individual sports separately) were made equal in terms of no. of sportspersons in each group by making use of lottery method. After applying lottery method, each group comprised of 13 sportspersons. Then onwards, F-test (one way ANOVA) was applied on stress scores for each three aggression level groups separately for team and individual sports. Further, if the F-value came out to be significant, least significant differences (LSDs) were computed at 0.05 and 0.01 levels of significance, for df 36. Then, these LSDs were compared with the respective actual/observed mean differences of three groups of college sportspersons under consideration. On the basis of this comparison, significance of mean differences in dependent variable (stress) of concerned groups was verified to observe the impact of aggression on the above

Results

The present study was confined to show impact of aggression on stress among college level individual and team game players of Punjab. The data was tabulated and suitably analyzed with the help of statistical techniques viz. mean, standard deviation, standard error of mean, t-test and f-test (one way Anova) were used.

1. Difference in aggression between team and individual game colleges players

The means of aggression scores of team and individual game players of colleges along with number, SD and t-value are given in Table-1.

Table 1: Difference in Aggression of team and individual game players of colleges

Variable	Players		Std. Error Difference	t-value	
	Team Game (N = 100)	Individual (N =100)			
Aggression	Mean	32.44	33.80	.973	1.397(NS)
	S.D.	7.269	6.475		

NS-Not Significant

Table 1 indicates that the calculated value of ‘t’ for finding out difference in the aggression of team and individual game college players, came out to be 1.397 which is less than the table value. (Table value of t = 1.98 for df 198 at 0.05 level of significance).

Hence, the Hypothesis that, “There would be no significant difference in aggression between team and individual game players of colleges.” stands accepted. It may be interpreted that team and individual game college players do not differ significantly from each other with respect to their aggression level.

2. Impact of aggression level on stress of team game players of colleges

In order to study the impact of aggression on stress of team

game players of colleges, the statistical technique of ‘Analysis of Variance (one way)’ was applied. For this, the aggression variable was considered at three levels i.e. high, moderate, and low aggression. The sampled team game players of colleges were divided into three groups on the basis of their aggression scores by adopting the procedure $M \pm 1 S.D.$ Further, these three groups were made equal in terms of

number of players in each group, by making use of ‘Lottery method’.

For finding out the significance of the difference in the means of stress scores of team game players of colleges at different levels of their aggression, statistical technique of Analysis of Variance (one way) was applied.

Table 2: Summary Table of Analysis of Variance (one way)

Sr. No.	Source of Variation	Sum of Squares	Df	Mean Square (Variance)	S.D.	F
1	Among Means	108.156	2	54.078	2.6295	7.8209**
2	Within Groups	248.924	36	6.9145		
	Total	357.08	38			

** - Significant at 0.01 level of significance

It is clear from Table 2 that the ‘F’- value for three groups of team game players of colleges on the variable of stress came out to be 7.8209 which is highly significant at 0.01 level of significance, for df 2/36. This indicates that the three groups of team players differ significantly on the variable of stress. Hence, the hypothesis that, “*There would be no significant difference in stress of team game players of colleges possessing different aggression level,*” stands rejected. So, it may be inferred that stress level of team players of

colleges is significantly influenced by their level of aggression. Further, for finding out the significance of difference in the mean stress scores of team game players of colleges possessing different aggression level, t-test was applied.

The mean stress scores of three groups of team game college players with different aggression level along with respective mean differences are given in Table 3.

Table 3: Mean Stress Scores of Team game College Players possessing Different Aggression level

Sr. No.	Name of Group	No. of Players	Mean Anxiety Score	Difference in Means
A	High Aggression Level Group (40 & above)	13	6.153	1.923 (NS) (A-B)
B	Moderate Aggression Level Group (26 to 39)	13	4.230	2.154* (B-C)
C	Low Aggression Level Group (25 & below)	13	2.076	4.077** (A-C)

* - Significant at 0.05 level of significance ** - Significant at 0.01 level of significance NS - Not significant

Further, least significant differences (LSDs) were computed at 0.05 and 0.01 level of significance, for df 36 which are as under:

LSD at 0.05 level of significance = 2.0929

LSD at 0.01 level of significance = 2.8043

There least significant differences (LSDs) were compared with respective mean differences in stress scores of three groups of team game players of colleges. On the basis of this comparison, it becomes evident that team game players of colleges with high and moderate aggression level possessed significantly higher stress as compared to team game players of colleges with low aggression level. However, team game players of colleges with high and moderate aggression level do not differ significantly from each other with respect to their stress scores.

3. Impact of aggression level on stress of individual game players of colleges

In order to study the impact of aggression on stress of individual game players of colleges, the statistical technique of ‘Analysis of Variance (one way)’ was applied.

Table 5: Mean Stress Scores of Individual game College Players possessing Different Aggression level

Sr. No.	Name of Group	No. of Players	Mean Anxiety Score	Difference in Means
A	High Aggression Level Group (41 & above)	13	8.7692	4.1539** (A-B)
B	Moderate Aggression Level Group (28 to 40)	13	4.6153	2.4615* (B-C)
C	Low Aggression Level Group (27 & below)	13	2.1538	6.6154** (A-C)

** - Significant at 0.01 level of significance * - Significant at 0.05 level of significance

Further, least significant differences (LSDs) were computed at 0.05 and 0.01 level of significance, for df 36 which are as under:

LSD at 0.05 level of significance = 1.9634

Table 4: Summary Table of Analysis of Variance (one way)

Sr. No.	Source of Variation	Sum of Squares	Df	Mean Square (Variance)	S.D.	F
1	Among Means	290.6667	2	145.3333	2.4668	23.8822**
2	Within Groups	219.0769	36	6.0854		
	Total	509.7436	38			

** - Significant at 0.01 level of significance

It is clear from Table 4 that the ‘F’- value for three groups of individual game players of colleges on the variable of stress came out to be 23.8822 which is highly significant at 0.01 level of significance, for df 2/36. This indicates that the three groups of individual game players differ significantly on the variable of stress. Hence, the hypothesis that, “*There would be no significant difference in stress of individual game players of colleges possessing different aggression level,*” stands rejected.

The mean stress scores of three groups of individual game college players with different aggression level along with respective mean differences are given in Table 5.

LSD at 0.01 level of significance = 2.6307

There least significant differences (LSDs) were compared with respective mean differences in stress scores of three groups of individual game players of colleges. On the basis of

this comparison, it becomes evident that individual game players of colleges with high and moderate aggression level possessed significantly higher stress as compared to individual game players of colleges with low aggression level. However, all the three groups of individual game players of colleges with high, moderate and low aggression level differ significantly from each other with respect to their stress

scores.

4. Difference in stress between team and individual game colleges players

The means of stress scores of team and individual game players of colleges along with number, SD and t-value are given in Table-6.

Table 6: Difference in stress of team and individual game players of colleges

Variable		Players		Std. Error Difference	t-value
		Team Game (N=100)	Individual (N=100)		
Stress	Mean	4.35	5.62	.438	2.899**
	S.D.	2.993	3.200		

** - Significant at 0.01 level of significance

Table 6 indicates that the calculated value of 't' for finding out difference in the stress of team and individual game colleges players, came out to be 2.899 which is higher than the table value. (Table value of $t = 2.63$ for $df = 198$ at 0.01 level of significance).

Hence, the Hypothesis No. 10 that, "There would be no significant difference in stress between team and individual game players of colleges," stands rejected. It may be interpreted that team and individual game college players differ significantly from each other with respect to their stress level.

Conclusions

The data in the present study was tabulated systematically and analyzed by using the statically techniques on the basis of analysis of data the following conclusion have been drawn:

1. It is concluded that team and individual game players of colleges do not differ significantly from each other with respect to their aggression level.
2. It is concluded that team and individual game players of colleges differ significantly from each other with respect to their stress level.
3. It is concluded that the aggression level of team game players of colleges significantly influenced their stress. Team game players of colleges with either high or moderate aggression level significantly possessed high stress as compared to team game players with low aggression level. However, there existed no significant difference in mean stress scores of team game players of colleges with high and moderate aggression level.
4. It is concluded that the aggression level of individual game players of colleges significantly influenced their stress. Individual game players of colleges with high and moderate aggression level possessed significantly higher mean stress as compared to individual game players with low aggression level. However, all the three groups of individual players of colleges with high, moderate and low aggression level differ significantly from each other with respect to their stress scores.

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