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## Relationship between selected psychological variables among trainees of combat sports

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### Abstract

The study was conducted with a motive for the analysis of relationship between selected psychological variables among trainees of combat sports. Three psychological variables were selected for the study i.e. Aggression, Sports Competition Anxiety and Sports Achievement Motivation to analyze the correlation between Motivation with Anxiety and Aggression with Anxiety among combat sports-persons from Boxing, Wrestling and Judo discipline from trainees of Diploma course NSNIS Patiala. For the purpose of this study, 36 elite male sports- persons whose mean and standard deviation of age was  $28.72 \pm 3.49$  from those three sports discipline, 12 from each sport were randomly selected. For measuring the aggression, Buss Perry Aggression Questionnaire (BPAQ) developed by Buss and Perry in 1992, for sports competition anxiety, Sports Competition Anxiety Test (SCAT) developed by Rainer Martens in 1977 and for sports achievement motivation, Sports Achievement Motivation Test (SAMT) developed by M.L. Kamlesh in 1990 were introduced respectively. For the interpretation of data and statistical analysis, Descriptive Statistics and Pearson Product-moment correlation coefficient were conducted. At 0.05, the level of significance had been taken. From the study it was found that there was a significant negative correlation of sports achievement motivation with sports competition anxiety among trainees of combat sports. For aggression with sports competition anxiety, the relationship was found insignificant along with a negative correlation among the selected combat sports- persons.

**Keywords:** Buss Perry Aggression Questionnaire (BPAQ), Sports Competition Anxiety Test (SCAT), Sports Achievement Motivation Test (SAMT), combat sports-persons

### Introduction

Sports Achievement Motivation, Sports Competition Anxiety and Aggression are three closely related psychological factors which are very much important to reach up to optimum level sports performance. Achievement Motivation is known to be as a very important psychological factor in Human Behavioral psychology.

Achievement Motivation has a vital role in sports competitive situation and also very much responsible to achieve optimum level of enhanced sports performance. Sports Achievement Motivation is a tendency that makes an athlete to prepare and accomplish any task above than their level, which may also be a challenging and difficult one as well.

Sports Competition Anxiety is known to be an important psychological variable for Human Psychology of Emotion. It is believed to be one of the most crucial psychological aspects that often create negative effect upon the performance of elite level of sports-persons.

The behavior of an athlete in a certain way that develops rage or the behavior of a person that develops within own as a normal human emotion which often tends to attack people when it becomes out of control, it can be an expression of threat or harm to any person which is termed as Aggression.

Achievement Motivation, Competition Anxiety and Aggression were having an important role in sports, mostly in combative sports. A study was conducted for the assessment of relationship between Achievement Motivation and Competitive anxiety among female All India Inter University participated elite swimmers was found a negatively correlated (A. Kumar Halder, Ashish Phulkar, 2020) [1].

Similarly, in another study between Achievement Motivation and Competition Anxiety were found significant predictors among athletes for performance levels (Tor Oskar Thomassen, Lars Bauger, Anee Marte Pensgaard, 2013) [4]. With respect to Aggression and Anxiety, a study also found that there is higher risk of anxiety associated with aggression among adolescents. (Chung, J. E. *et al.*, 2019) [3].

However, the sports expert believe that performance of any athletes whether team game or individual not only have to be prepared through physical development but also need to deal with positive state of mental health preparation.

## Methods

The administration of the test was done with proper instructions related to the questionnaire and also assisted while getting any difficulty with understanding related to the statements of particular questionnaire. They were asked to complete the questionnaire without any time limit. The selected subjects were following normal institutional curriculum with their regular sports practice.

The scores were calculated according to BPAQ, SCAT and SAMT questionnaires scoring norms.

For measuring the aggression, Buss Perry Aggression Questionnaire (BPAQ) developed by Buss and Perry in 1992 was used. For sports competition anxiety, Sports Competition Anxiety Test (SCAT) developed by Rainer Martens in 1977 was used. For sports achievement motivation, Sports Achievement Motivation Test (SAMT) developed by M.L. Kamlesh in 1990 was introduced respectively.

For measuring the mean value for Aggression, the dependent variables were Physical Aggression, Verbal Aggression, Anger and Hostility. For measuring Sports Competitive Anxiety, a total number of 15 statements' mean score was calculated and classified accordingly with three different levels which was low anxiety if less than 17, moderate anxiety if found between 17-24 and high anxiety if more than 24. For measuring Sports Achievement Motivation, a total number of 20 statements' mean score was calculated and classified accordingly again with three different levels which was low achievement motivation if less than 24, moderate achievement motivation if found between 24-30 and high achievement motivation if more than 30.

For the purpose of this study, 36 elite combat sports-persons from Boxing, Wrestling and Judo discipline where 12 trainees from each sport from Diploma course 2020 outgoing batch of NSNIS Patiala 2020 outgoing batch were randomly selected. The trainees were delimited with a minimum criteria of recognized National level sports participation. The selected subjects' mean and standard deviation of age was  $28.72 \pm 3.49$ .

For the interpretation of data and statistical analysis, Descriptive Statistics and Pearson Product-moment correlation coefficient were conducted through using Microsoft Office Excel 2007.

At 0.05, the level of significance was taken. Descriptive statistics: mean and standard deviation were used to calculate the average and variability of Aggression, Sports Competition Anxiety and Sports Achievement Motivation.

## Results

**Table 1:** Descriptive statistics of selected variables

Variables	N	Mean	SD
Sports Achievement Motivation Test (SAMT)	36	31.38	3.53
Sports Competition Anxiety Test (SCAT)	36	16.30	2.26
Buss Perry Aggression Questionnaire (BPAQ)	36	89.13	4.53

*Note:* Here N = Number of combat sport-persons

Table 1 shows the means and standard deviations of the three selected psychological variables. Here the Means along and SDs of Sports Achievement Motivation Test (SAMT), Sports Competition

Anxiety Test (SCAT) and Buss Perry Aggression Questionnaire (BPAQ) of Combat Sport trainees from Diploma course of NSNIS Patiala are  $31.38 \pm 3.53$ ,  $16.30 \pm 2.26$ ,  $89.13 \pm 4.53$ .

**Table 2:** Correlation between SAMT and SCAT

Name of the variables	N	r	p
Sports Achievement Motivation Test (SAMT)	36	-0.39	0.016
Sports Competition Anxiety Test (SCAT)	36		

\*Significance level at 0.05.

Table 2 shows the sample size with the Pearson Product Moment Correlation Coefficient and *P*-value for the SAMT and SCAT variables. A significant negative correlation was obtained ( $r = -0.39$ ) between Sports Achievement Motivation and Sports Competition Anxiety among Combat Sport trainees from Diploma course of NSNIS Patiala. The *P*-value  $0.016 < 0.05$  clearly shows a significant correlation between the selected psychological variables, i.e. Achievement Motivation and Competitive Anxiety.

**Table 3:** Correlation between BPAQ and SCAT

Name of the variables	N	r	p
Buss Perry Aggression Questionnaire (BPAQ)	36	-0.17	0.31
Sports Competition Anxiety Test (SCAT)	36		

\*Significance level at 0.05.

Table 3 shows the sample size with the Pearson Product Moment Correlation Coefficient and *P*-value for the BPAQ and SCAT variables. A negative correlation was obtained ( $r = -0.17$ ) between Aggression and Sports Competition Anxiety among Combat Sport trainees from Diploma course of NSNIS Patiala. The *P*-value  $0.31 > 0.05$  clearly shows an insignificant correlation between the selected psychological variables, i.e. Aggression and Competitive Anxiety.

## Conclusion

Based on the data meaning and statistical analysis of results, the researchers finally reached up to the conclusions of this study which are as follows:

At first, the mean of selected psychological variables were calculated from the data, where it was found that the selected trainees of combat sports were highly motivated, above average aggression with low competitive anxiety.

Secondly, the study revealed that there was there was a significant negative correlation of sports achievement motivation with sports competitive anxiety among trainees of combat sports. For aggression with sports competitive anxiety, the correlation was found negatively insignificant among the selected combat sports-persons.

The study revealed that, sports achievement motivation for the athletes of combat sports is the key factor for to mental enhancement for reducing sports competitive anxiety which also helps in progression of performance among elite level sports-persons. Thus, the study shows significant correlation between sports achievement motivation and sports competitive anxiety among the trainees of combat sports-persons.

However, the study similarly also revealed a negative correlation between aggression with anxiety though it was found insignificant due to the fact that the athletes often indulge them with more aggressive practice during the training session that helps simultaneously lowering down the sports competitive anxiety, but for being not up to required significant value. Thus, the study shows an insignificant correlation between aggression and sports competitive anxiety among the trainees of combat sports.

## Conflict of interest statement

The authors declare no conflicts of interest.

**About the authors**

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