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Competitive anxiety between sub-junior and junior male pugilists: A comparative study

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Abstract

Purpose: The purpose of the study was to compare and quantify the competitive state anxiety among the Arunachal Pradesh boxers competing at the sub-junior and junior state levels.

Methods: For the purpose of the study, sixty (60) male boxers of various district of Arunachal Pradesh was purposively selected with the age of sub-junior ranging from 12 and 14 with mean age (13.03±0.93) and junior ranging from 15 and 16 with mean age (15.7±0.79) were selected purposively. The research was carried out during the state level championship in order to measure the sports competition anxiety test (SCAT) questionnaire by Marten e.i, was applied to measure the competitive state anxiety. Z-test was applied to find the significance difference between the junior and sub-junior boxers of Arunachal Pradesh. The level of significance was set at 0.05, in order to test the hypothesis.

Results and Discussion: The study's findings show that there was a significant difference between the sub-junior and junior boxers ($p<0.05$) as the null hypothesis is rejected at 0.05 level of significance.

Keywords: Boxing, sports psychology, anxiety, sports competition anxiety test (scat)

Introduction

An interdisciplinary field that combines ideas from kinesiology and psychology is sports psychology. It contains studies on how psychological traits and performance are related, as well as how physical and psychological traits are affected by physical activity and participation in sports. Technical proficiency, mental toughness, physiological aspects, and tactical awareness all play a part in how well an athlete performs. The fast-growing commercialization of sports has made mental health even more crucial, putting increased pressure on players of all ages and skill levels.

Anxiety is an emotional state that is characterised by elevated autonomic nervous system activation and subjective, consciously felt sensations of tension, anxiety, nervousness, and worry (Hackfort & Spielberger, 1989) [4]. An emotional state that is present or ongoing, marked by tension and emotions of apprehension, and linked to the organism's activation is called state anxiety. Negative affect is associated with state anxiety. State anxiety will henceforth be referred to as A-state. Individual differences in (a) perception of threat, (b) A-state response to perceived threat, or (c) both can be described by the construct of competitive trait anxiety. As a result, people vary in their propensity to view hostile events as dangerous, in the strength of their A-state reactions in these circumstances, or in both. The development of SCAT aimed to offer a credible and dependable way to gauge competitive A-trait (Martens *et al.*, 1990) [8].

Boxing's history dates back to 400 BC. It is thought that boxing, or pugilism, originated with the Egyptians. Boxing is an intricate sport in which strength and talent are compared. Competitive boxers need both of these attributes, but their most important requirement is that they be in peak physical and mental condition. Participants were referred to as pugilists, and the word "boxing" originated from the act of clenching one's fist, turning the fingers into the palm of the hand, and positioning the thumb such that it lay along the fingers to form a box. Numerous sports psychology research has focused on anxiety, especially competitive anxiety, which is thought to be a major element that tends to impede athletic performance (Arnold & Fletcher, 2021) [2].

The necessity to win causes pressure, dread, and anxiety in most sportsmen, which may be explained by the exaltation of the feeling of triumph and the demotivation of defeat (Neal *et al.*, 2016) [10]. Anxiety plays a significant role in high-performance athletic outcomes. On the impact of pre-competitive anxiety on boxing athletes' performance, there is still disagreement in the research (Armas Alejo *et al.*, 2020). Therefore, this study's goal was to examine and contrast the pre-competitive anxiety levels of male boxers from Arunachal Pradesh who competed in the sub-junior and junior divisions by using Sports competition anxiety test (scat).

Methodology

Sample

The 4th Jarbom Gamlin State Level Boxing Championship, which took place in Ziro, Arunachal Pradesh, provided the sample for this study. There were 75 questionnaires were applied to conduct the study, of which 15 questionnaires were rejected because of incomplete information. The final sample is composed of 60 questionnaire of two different age category (Sub-junior=30, Junior=30).

Administration of the test

The test was just conducted before the competition. We applied the Sports competition anxiety test (scat) by Martens *et al.*, 1990 [8]. Each participant has received a consent form prior to the test being administered. To help them better comprehend the test, the subjects were fully told about the study. All subjects were given the questionnaire to fill, it was made mandatory to response every question and they have to response in either never, sometimes or always. The study was conducted by the group of researchers.

Scat Scoring

The SCAT questionnaire is consisting of 15 questions out of which 5 questions i.e. 1, 4, 7, 10, 13 are spurious and they are not scored. The subjects have to response every question, there has no provision of right and wrong answer. Items 2, 3, 5, 8, 9, 12, 14 and 15 are scored as per the following key: never =1, sometimes =2, always=3. Scoring of items no 6th and 11th are scored as per the following key: never=3, sometimes=2, always=1. The scores of all the items are added to measure the overall competition anxiety, higher the score higher the tendency to face the competition anxiety.

Norm of SCAT Score

Less than 17: a Low level of Anxiety.

17 to 24: an Average level of Anxiety

More than 24: a High level of Anxiety.

Statistical analysis

Descriptive statistics was applied to examine the hypothesis of the study mean, standard deviation-test was applied to compare the competition state anxiety between two groups. The level of significance was set at 0.05.

Findings

Table 1 clearly shows that the average SCAT score of the Sub-junior boxers (21.6±2.8) was considerably higher than the junior boxers (19.9±2.6). The SCAT score also shows that the state anxiety level of both the groups are "average" because scores of both the groups are lay between 17 to 24 SCAT score.

Table 1: The average SCAT score

Descriptive Statistics					
	Level	N	Mean	Std. Deviation	Std. Error Mean
Scores	sub-junior	30	21.6000	2.89589	.52872
	Junior	30	19.9333	2.66437	.48644

Table 2: The competitive anxiety test for sub-junior boxers is positively skewed

Sub-Junior	N	30
	Mean	21.6000
	Std. Error of Mean	.52872
	Median	22.0000
	Mode	22.00
	Std. Deviation	2.89589
	Variance	8.386
	Skewness	.447
	Std. Error of Skewness	.427
	Kurtosis	.385
	Std. Error of Kurtosis	.833
	Range	12.00
	Minimum	16.00
	Maximum	28.00
Sum	648.00	
Coefficient of Variance	13.41%	

Table 3: Junior boxers' scores on the sports competition anxiety test are positively skewed

Junior	N	30
	Mean	19.9667
	Std. Error of Mean	.49708
	Median	20.0000
	Mode	17.00
	Std. Deviation	2.72262
	Variance	7.413
	Skewness	.246
	Std. Error of Skewness	.427
	Kurtosis	-1.185
	Std. Error of Kurtosis	.833
	Range	9.00
	Minimum	16.00
	Maximum	25.00
Sum	599.00	
Coefficient of Variance	13.64%	

Table 2 shows that the competitive anxiety test for sub-junior boxers is positively skewed: This means that most sub-junior boxers score below the mean. Furthermore, the skewness of the sub-junior boxers suggests that the majority of the SCAT are below the mean. The data is leptokurtic (positive) and shows negligible variation around the mean and that there is less dissimilarity around the mean in SCAT among the sub-junior boxers. Additionally, the distribution assumes that the data tends to be concentrated around its mean. It is noteworthy that the SCAT score of the sub-junior boxers ranged from 16 to 28. Table 1 also shows that the coefficient of variation of sub-junior boxers for SCAT is 13.41%.

Table 3 shows that junior boxers' scores on the sports competition anxiety test are positively skewed, indicating that the majority of junior boxers perform below average. Furthermore, the skewness of the sub-junior boxers suggests that the majority of the SCAT is below the mean. The data are platykurtic (negative), suggesting that the junior boxers' observation of fear of athletic competition is less around their mean. It is noteworthy that the SCAT score of the junior boxers was between 16 and 25. Table 2 further shows that the sub-junior boxers' coefficient of variation for fear of sports competitions is 13.64%.

Table 4a: The Kolmogorov-Smirnov and Shapiro-Wilk test of the sub-junior boxers

Tests of Normality ^a of Sub-junior Boxers						
	Kolmogorov-Smirnov ^b			Shapiro-Wilk		
	Statistic	DF	Sig.	Statistic	DF	Sig.
Scores	.148	30	.093	.943	30	.112

a. Level = sub-junior

b. Lilliefors Significance Correction

Table: 4a shows the Kolmogorov-Smirnov and Shapiro-Wilk test of the sub-junior boxers: the data are insignificant: $0.112 > 0.05$ (P. value). Furthermore, it implies that the data is normally distributed.

Table 4b shows the Kolmogorov-Smirnov and Shapiro-Wilk test of the junior boxers: The data are insignificant: $0.127 > 0.05$ (P. value). Furthermore, it implies that the data is normally distributed.

Table 4b: The Kolmogorov-Smirnov and Shapiro-Wilk test of the junior boxers

Tests of Normality ^a of Junior Boxers						
	Kolmogorov-Smirnov ^b			Shapiro-Wilk		
	Statistic	DF	Sig.	Statistic	DF	Sig.
Scores	.142	30	.018	.913	30	.127

a. Level = Junior. b. Lilliefors significance correction

Table 5: Mean comparison of Sports Competitive Anxiety Test on Sub-Junior and Junior players

Independent Samples Test										
		Levene's Test for Equality of Variances		T-test for Equality of Means						
		F	Sig.	T	DF	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Scores	Equal variances assumed	.041	.840	2.320	58	.024*	1.66667	.71845	.22854	3.10480
	Equal variances not assumed			2.320	57.602	.024*	1.66667	.71845	.22832	3.10501

* Significance at 0.05

Table 5 clearly indicate that after comparing the anxiety level of both the groups, the p-value was smaller than 0.05 level of significance, therefore it means there was a significant difference in SCAT between sub-junior and junior boxers.

Discussion and Conclusions

As both groups' SCAT scores fall between 17 and 24, it is evident from the t-test results above that the junior and sub-junior boxers' scores are "average." Additionally, the research shows that the p-value is lesser than the significance level of 0.05 ($p\text{-value} < 0.05$), indicating a significant difference between the junior and sub-junior boxers. Another study conducted by Amit Kumar in 2016^[7] provided support for ours. The results of a sports competition anxiety test showed a substantial difference between the Haryana basketball players, both male and female. According to a study by Asim Khan *et al.* (2016)^[5], there was a significant difference among male Jimma University athletes in the following sports: football, basketball, table tennis, Athletics and Gymnastics) in their Sports Competition Anxiety. Our study's result was in conflict with those of Verma Kabita's (2015)^[13] investigation, which found no statistically significant difference between the three groups of female judokas from various colleges at Punjab University Chandigarh. The high achievement group (TH1), the average achievement group (TM2), and the low achievement group (TL3).

Conclusion

Based on the aims of the present study, the applied methods, limitations and results, we may conclude that there was a significant difference in sports competition anxiety between the junior and sub-junior boxers of Arunachal Pradesh.

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