



# Educational Perspective: An Analytical Study of Coping Skill of Track and Field Medalist and Non-Medalist Male Athletes

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## ABSTRACTS

The study aims at analyzing from an educational perspective the effect of Coping Skills on the achievement level of male athletes in Track and Field. 200 male subjects were selected through Randomized Sequential Sampling from the unified list of medalists and Non-Medalists. To test Coping skills, ACSI-28 BR was preferred due to its high reliability and validity. The data were analyzed through an independent t-test and the level of significance was set at 0.05. The descriptive analysis of the data revealed that the mean score of Medalists was much higher than non-medalist athletes. Further, the analysis of data also reveals that there was a significant difference ( $p < 0.05$ ) in the mean score of Medalist and Non-Medalist players in both track and field events. Thus, it was concluded that the selected psychological variables have a role in the achievement level of the athletes and must be considered during training for Track & Field events.

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## 1. INTRODUCTION

Psychological variables that have an eminent role in Sports performance have always been a point of curiosity among sports scientists. Though Physical, Physiological, Motor, and Skill related variable has always been in limelight as predictor variable for sporting success. However, in recent years the Psychological variables have been a point of discussion (Huijgen, *et al.*, 2014). Kucukibis and Gul (2019) has pointed out that motives, either Physiological or Social along with immediate or long-term life goals shape the future of an individual. Among other Psychological variables coping skills are considered an important element of Mental Training (Newland *et al.*, 2013). The objective of the present study is to find out the difference in Coping skills among medalist and non-medalist Track and Field Male Athletes.

## 2. METHODS

200 male subjects were selected through Randomized Sequential Sampling from the unified list of medalists and Non-Medalists. To test Coping skills, ACSI-28 BR developed by Miranda *et al.* (2018) was preferred due to its high reliability and validity. The data were analyzed through an independent t-test and the level of significance was set at 0.05. The descriptive analysis of the data revealed that the mean score of Medalists was much higher than non-medalist athletes. Further, the analysis of data also reveals that there was a significant difference ( $p < 0.05$ ) in the mean score of Medalist and Non-Medalist players in both track and field events.

### 2.1. Selection of subjects

For this study, 200 medalist and non-medalist Track & Field Male Athletes (age above 18 years) were selected from various Indian Universities (see **Table 1**). The subjects were selected through Randomised-Sequential Sampling.

**Table 1.** Selection of subjects.

S.N	Subjects	Number of Subjects
1	Track Medallist Athletes (Male)	50
	Field Medallist Athletes (Male)	50
2	Track Non-Medallist Athletes (Male)	50
	Field Non-Medallist Athletes (Male)	50
	<b>Total</b>	<b>200</b>

### 2.2. Research design and protocol

For the study, we contacted the sports departments of various Indian Universities and formed a uniform list of participants. Then the list was randomized and the participants were contacted for their consent. The athletes who were unwilling to take part in the study were removed and the fresh list of Participants (with consent) was randomized through a computerized program and then selected sequentially.

For measuring athletes' coping skills, ACSI-28 BR was used (Miranda *et al.*, 2018). ACSI-28BR consists of 28 items in seven subscales (coping with adversity, peaking under pressure, goal setting/mental preparation, concentration, freedom from worry, confidence and achievement motivation, and catching ability). ACSI-28 BR demonstrated a full-scale internal consistency of 0.86 with all subscales except for concentration and catch ability.

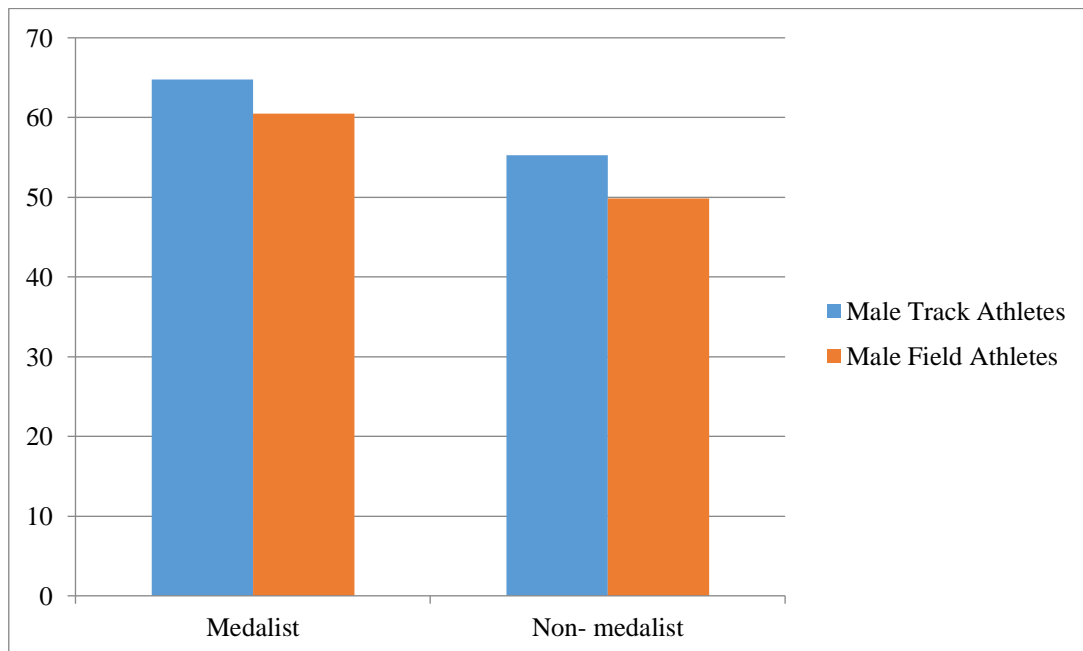
The data were analyzed through SPSS 20 and an Independent t-Test was used with 0.05 as the level of significance.

### 3. RESULTS AND DISCUSSION

The trend of scores of Coping Skill Psychological variables of medalist and non-medalist Track & Field Male Athletes is depicted in **Table 2**. **Figure 1** is the mean score of coping skills of medallist and non-medallist track and field male athletes.

**Table 2.** Descriptive statistics of coping skill of medalist and non-medalist track & field male athletes.

	Male			
	Track Athletes		Field Athletes	
	medallist	Non-medallist	medallist	Non-medallist
Mean	64.80	55.28	60.52	49.84
Median	64.00	55.00	61.00	50.00
Variance	12.17	10.29	8.18	6.06
Std. Dev	3.49	3.21	2.86	2.46
Minimum	60.00	50.00	56.00	46.00
Maximum	70.00	60.00	65.00	55.00
Skewness	0.04	0.09	-0.06	0.36
Kurtosis	-1.51	-1.21	-0.76	-0.51

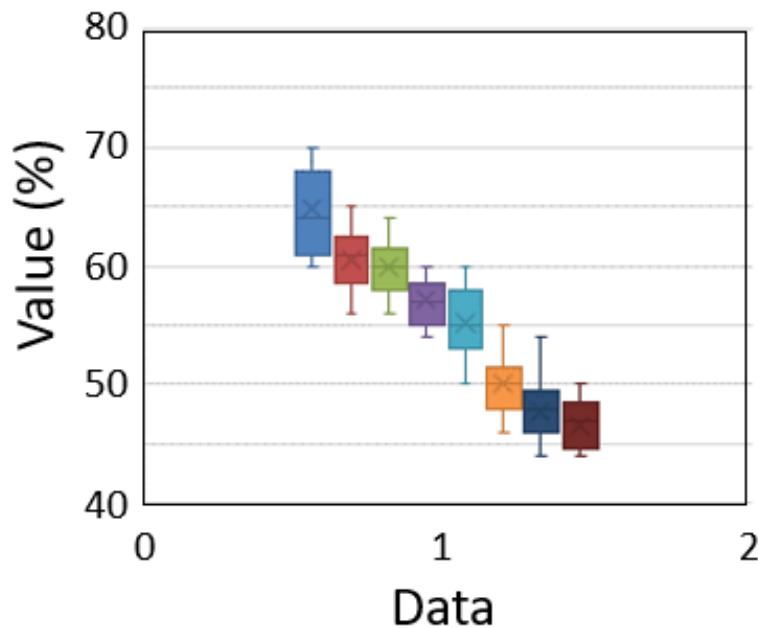


**Figure 1.** Mean score of coping skill of medallist and non-medallist track and field male athletes.

The results of the t-test have certain assumptions which need to be fulfilled before proceeding further. If assumptions are not fulfilled then the validity of the findings gets reduced. The major assumptions and their tests are mentioned:

- (i) The assumption of Outlier: Tested through Box-Plot Test
- (ii) The Homogeneity of Variance: Tested through Levene’s Test

**Figure 2** depicts that there was no outlier in the tested data and hence establishes the validity of the t-test applied in the present study. We showed the results with a standard deviation.



**Figure 2.** Box Plot test for coping Skill.

Levene's test for equality of variance depicts that the test statistic was not significant at a 0.05 level of significance as the obtained significance value was greater than 0.05 for all the testing conditions. Thus, it concludes that there was equal variance among groups and performing of independent t-test was optimally valid. Detailed t- test for differences of means for coping skill score of track and field male athletes is shown in **Table 4**.

**Table 3** suggests that in the case of Levene's test, the obtained significance value is 0.42 and 0.46 for track and field male athletes respectively. This concludes that the test statistic was not significant at a 0.05 level of significance as the obtained significance value was greater than 0.05 for coping Skills. On the contrary, **Table 4** denotes that the obtained significance value of the Track and Field Athletes was less than 0.05. Hence t-test statistics conclude that there is a significant difference in coping skills of track and field male athletes.

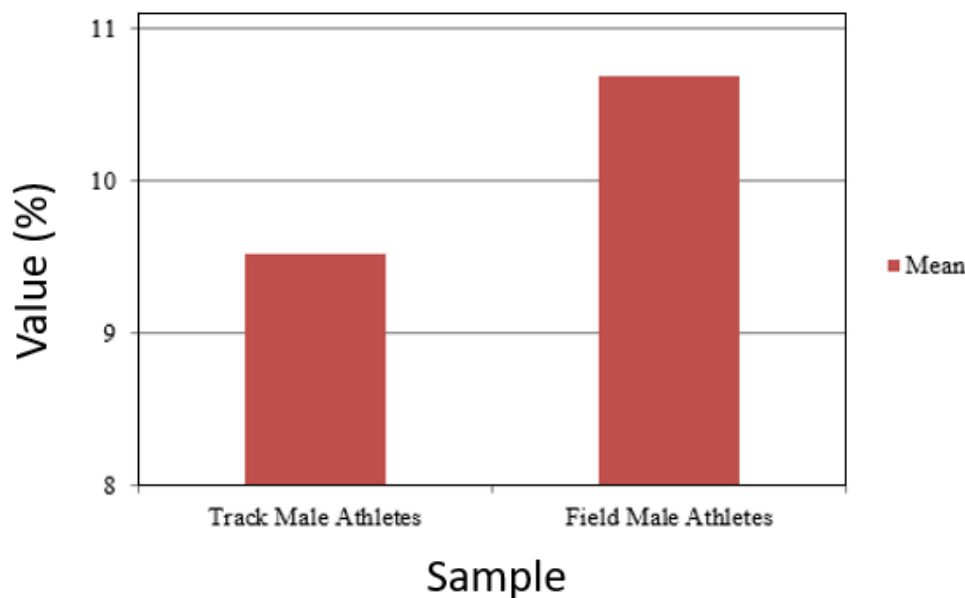
**Table 3.** LEVENE'S test for equality of variance of Coping Skill of Track and Field Male Athletes.

		Levene's Test for Equality of Variances	
		F	Sig.
Track Athletes (Male)	Athletic Coping Skill	0.65	0.42
Field Athletes (Male)	Athletic Coping Skill	0.55	0.46

Thus, it was concluded that Psychological variables and coping skills are very essential to monitoring the progress in a sports career along with the Physical & Mental domain. The study recommends considering coping skills in Talent identification and Sports training. Further, Sports Psychology being an emerging domain in India, a lot of similar findings needs to be validated in the Indian context.

**Table 4.** t-test for differences of means for coping skill score of track and field male athletes.

		t-test	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Track Athletes (Male)	Athletic Coping Skill	10.04	48	0.00	9.52	0.95
Field Athletes (Male)	Athletic Coping Skill	14.15	48	0.00	10.68	0.75

**Figure 3.** Mean score of coping skill of track and field male athletes.

#### 4. CONCLUSION

The purpose of the study is to examine, from the standpoint of education, how Coping Skills affect male athletes' accomplishment levels in Track & Field. Through Randomized Sequential Sampling, 200 male subjects were chosen from the combined list of medalists and non-medalists. The data's descriptive analysis showed that medal-winning athletes had mean scores that were much higher than those of non-winners. The data analysis also showed that there was a significant difference between Medalist and Non-Medalist players' mean scores in both track and field competitions. Based on the results obtained from the present investigation, it may be concluded that there is a significant difference in the coping skills of track and field male athletes.

#### 5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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