

## The Relationship Between Stress Levels, Sports Achievement and Academic Achievement in Sports Athletes Indoor and Outdoor Universitas Negeri Semarang

Ettania Agustina<sup>1✉</sup>, Heny Setyawati<sup>2</sup>, Donny Wira Yudha Kusuma<sup>3</sup>

<sup>1,2,3</sup>Universitas Negeri Semarang, Indonesia

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### Abstract

Stressor in athletes are categorized into three: competitive, organizational, personal. The cause of stress can be caused by the location of the room, the classification of sports based on the place of space is divided into two: indoor and outdoor. In sports psychology, stress levels affect sports and academic achievement. The purpose of this study was to analyze differences in stress levels, relationship between stress levels and sports achievements, and the academic achievements of UNNES athletes. This study used a quantitative approach with the help of the DASS 42 questionnaire. Data analysis was done using the T-test, correlation and regression. The results of the study showed the mean stress level in athletes indoor 1.86 athletes outdoor 1.50 statistically it is known that there are differences in the mean stress levels of athletes indoor and outdoor. Based on value Sig.  $0.471 > 0.05$ , which means there is no relationship between stress levels and sports achievements. Other results show value Sig. between the level or category of stress and academic achievement is  $0.652 > 0.05$ , meaning that there is no relationship between the stress level variable and the athlete's academic achievement variable at Universitas Negeri Semarang. However, the effective contribution that influences it is 1.2%.

✉ Correspondence address:  
Kampus Pascasarjana UNNES, Jl. Kelud Utara III, Semarang  
E-mail: [ettania9@students.unnes.ac.id](mailto:ettania9@students.unnes.ac.id)

## INTRODUCTION

Sports psychology, also known as mental training aims to prepare athletes both psychologically and emotionally to face training routines as well as challenges in competition. In addition, sports psychology is able to increase motivation, increase performance, build self-confidence, manage anxiety, stress and improve athlete focus (Fransen et al., 2017; Holliday et al., 2008; Longshore & Sachs, 2015; Tod et al., 2017). Competitive sports have high potential for stress and anxiety levels (Judge et al., 2016; Spielberger, 2021). Stress is the body's reaction when under pressure or threat which can have both positive and negative impacts. Stress is one of the things that is often discussed in sports psychology related to athlete performance (Diyanto et al., 2018; Kusuma & Bin, 2017; Pradipta, 2017; Setiawan et al., 2020; Zenana et al., 2022). Stress in athletes is categorized into three types: competitive, organizational and personal (Correia & Rosado, 2019; Jensen et al., 2018; Mahakharisma, 2014; Nurkadri, 2022; Pradnyaswari & Budisetyani, 2018; Rice et al., 2019).

The cause of stress can also be caused by the space used in exercising. Classification of sports based on the space needed is divided into two, namely: sports indoor and sports outdoor. Sport indoor carried out in closed spaces such as sports halls, gyms while sport outdoor carried out in open places such as fields, parks, and other places. Universitas Negeri Semarang is one of the university that contains outstanding athletes in sports. The existence of the Faculty of Sports Science is a priority for athletes to be able to continue their education and also their career as an athlete. In sports psychology, the level of stress experienced by athletes will affect sports achievement and academic achievement. Because athletes must be able to divide their time between training and lectures.

Therefore this study has a problem formulation, namely how the levels and differences in stress levels, the relationship between stress levels and sports achievement, the relationship between stress levels and academic achievement experienced by sports athletes indoor

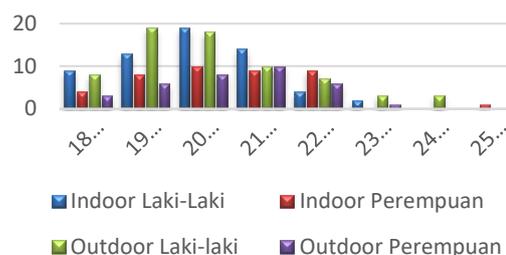
and outdoor Universitas Negeri Semarang. The purpose of this study was to analyze differences in stress levels, to analyze the relationship between stress levels and sports achievement, to analyze the relationship between stress levels and academic achievement of sports athletes indoor and outdoor Universitas Negeri Semarang.

## METHODS

This study uses a quantitative approach using data collection techniques, namely questionnaires Depression Anxiety Stres Scales (DASS 42). Sampling used a purposive sampling technique with the following criteria: active students, at least semester 2, athletes in indoor/outdoor sports, having the lowest achievement at the district/university level. Data analysis using the T Test, Product Moment Correlation and Linear Regression.

## RESULTS AND DISCUSSION

This study involved 204 athletes from Universitas Negeri Semarang which were divided into two groups, namely 102 athletes indoor and 102 athletes outdoor. The characteristics of the subject of this study are:

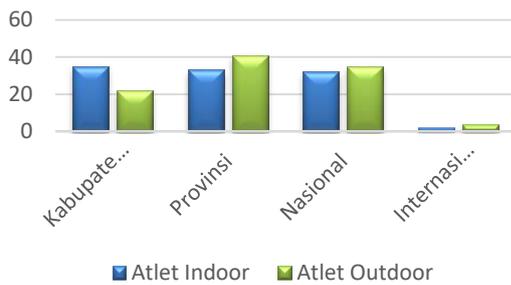


**Figure 1.** Characteristics of research subjects based on age and gender

Based on Figure 4.1, the sex of the male athlete indoor and outdoor as many as 129 athletes (63%) and female athletes as many as 75 athletes (37%).

The characteristics of research subjects based on faculty and class explained that the subjects in the top 3 indoor athletes by the Faculty of Sports Science in class 2022 were 30 athletes

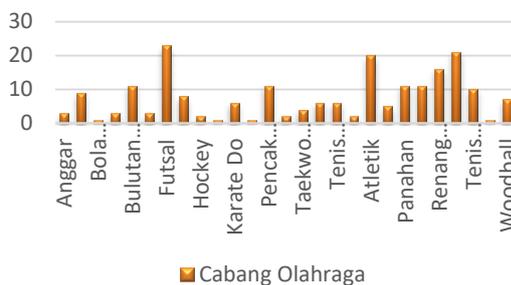
(29.41%), followed by class 2021 with 21 athletes (20.59%), class 2020 with 19 athletes (18.63) The characteristics of research subjects based on faculties and batches in outdoor athletes are the same as in indoor athletes, the top 3 by the Faculty of Sports Science class of 2022 are 32 athletes (31.37%), followed by the 2021 class of 21 athletes (20.59 %), class of 2020 as many as 18 athletes (17.65).



**Figure 2.** Characteristics based on sports achievements

Characteristics of research subjects based on sports achievements based figure 2 it is explained that the research subjects are athletes indoor dominant has the highest achievement at the regency/city level as many as 35 athletes (34.31%). Where as indoor dominant has the highest achievement at the provincial level with 41 athletes (40.20%).

The distribution of research subjects to athletes in sports is as follows:



**Figure 3.** Sports

**Differences in stress levels in indoor and outdoor sports athletes at Universitas Negeri Semarang**

The results of this study were to determine differences in stress levels in sports athletes indoor

and outdoor by using a two sample T test that is comparing the two mean it is as follows:

**Table 1.** Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Category	Indoor	102	1.86	.955	.095
	Outdoor	102	1.50	.841	.083

The research above shows that the mean of the indoor athlete category at Universitas Negeri Semarang is 1.86 which is in the light stress category. Meanwhile, the mean of the outdoor athlete category at Universitas Negeri Semarang was 1.50 in the mild category. From these data statistically descriptive it can be seen that there is a difference in the average stress level of indoor and outdoor sports athletes at Universitas Negeri Semarang. Sig. Value Levene's Test for Equality of Variances is 0.124 > 0.05 which means that the data between indoor athletes and outdoor athletes is the same or homogeneous. It can be seen from the Independent Sample Test table above in the Equal variances assumed Sig value. (2 tailed) of 0.004 < 0.05, which means there is a significant difference between the mean stress levels of indoor and outdoor sports athletes at Universitas Negeri Semarang.

The physical activity environment has a relationship with psychological health, such as temperature, noise, air quality, color and lighting (Kotko et al., 2022; Lee et al., 2022; Shea et al., 2011). Therefore the average athlete's stress level indoor higher than athletes outdoor Universitas Negeri Semarang. The results of the study were seen from filling out the athlete's questionnaire indoor spends a lot of energy, is impatient, gets irritated quickly, has difficulty calming down, and gets angry easily over trifles. According to Corina, et al, the stress level of sports athletes indoor higher because athletes will more easily experience fatigue caused by less oxygen in the room so they inhale a lot of carbon dioxide when exercising indoors (Sinta dan Anna Noordia, 2022).

**The relationship between stress levels and sports achievements of indoor and outdoor athletes at Universitas Negeri Semarang**

**Table 2.** The relationship between stress levels and sports achievements

		Sports Achievement
Stress Category	Pearson Correlation	-0.051
	Sig. (2-tailed)	0.471
	N	204

Based on table 2 values Sig. (2-tailed) between the level or category of stress and sports achievement is  $0.471 > 0.05$  meaning that there is no significant relationship or correlation between the stress level variable and the sports achievement variable. Pearson Correlation is negative (-) which means that the higher the level or category of stress, the lower the athlete's sports performance. This could be because the research subjects taken were dominant athletes who only won competitions at the district/city level (athletes indoor) and province (athlete outdoor).

Athletes still experience problems of poor performance, personal problems, loss of fitness, team/opponent problems, competition, injuries, training programs, pre-competition preparation, financial problems, pressure from around but maybe the athletes don't drag on and can still relax. because their burdens and responsibilities are not the same as athletes who usually win at national and international levels. National and international athletes have busy and regular training schedules. Therefore, elite athletes like this feel a great responsibility and burden, so it is undeniable that their stress levels are in the high or even very high category (Setyawati et al., 2020, 2021).

**The relationship between stress levels and academic achievements of indoor and outdoor athletes at Universitas Negeri Semarang**

**Table 3.** The relationship between stress levels and academic achievements

		Academic Achievement
Stress Category	Pearson Correlation	-0.032
	Sig. (2-tailed)	0.652
	N	204

Based on the table above the value Sig. (2-tailed) between the level or category of stress with academic achievement of 0.652. Where  $0.652 > 0.05$  means that there is no significant correlation between the stress level variable and the athlete's academic achievement variable at Universitas Negeri Semarang. Pearson Correlation or r count is negative (-), namely -0.032, which means that the higher the level or category of stress, the lower the athlete's academic achievement. This lack of relationship may be due to the dominant research subjects obtained from athletes from the Faculty of Sports Science class of 2022 of 30 (29.41%) athletes indoor and 32 (31.37%) athletes outdoor. The athlete has just entered the second semester and has gone through a period of adaptation to the class schedule and assignments (Lin et al., 2022).

High stress levels can affect the academic performance of athletes, as athletes who are still students or students doing exercises, potential injuries, doing assignments, getting good grades are things that have the potential to stress athletes (Ahmad et al., 2022; Anggara & Laksmiwati, 2022; Feriyanto et al., 2021). Especially for final students, psychological problems are very prone to experiencing, the pressure felt when working on a thesis makes stress levels increase and causes bad behavior such as poor sleep quality, increased anxiety, etc (Agusmar et al., 2019; Ambarwati et al., 2019; Aulia & Panjaitan, 2019; Saputri & Sugiharto, 2020). Hence the need for stress management training, therapy brief mindfulness, self-efficacy in order to reduce sources of negative stress that can damage physical and psychological health (Amirul Khaq, 2015; Andromeda, 2020; Arbi & Ambarini, 2018; Jamali et al., 2013).

**Effective Contribution**

**Table 4.** Effective Contribution

Variable	b	Cross Product	Regression	Effective Contribution Total
Sports Achievement	-0.114	-16.990	2.027	1.2
Academic achievement	-0.071	-1.256		

From these data it can be explained that the effective contribution of the stress level variable to

sports achievement and the stress level variable to academic achievement is 1.2%.

## CONCLUSION

There is a significant difference between the mean stress levels of indoor and outdoor sports athletes at Universitas Negeri Semarang. There is no significant relationship between stress levels and sports achievement and there is no relationship between stress levels and academic achievement of Universitas Negeri Semarang athletes. This research can be used so that athletes and coaches can concern more to sports psychology.

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