



Psychological Challenges in Gymnasts Before Porprov East Java IX: Depression, Anxiety, Stress, and Emotional Eating

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ABSTRACT

This study aims to examine the psychological challenges experienced by gymnasts in Gresik City who are preparing to participate in the 9th East Java Porprov competition, with a special focus on anxiety, depression, stress, and their relationship to emotional eating behaviour. The sample consisted of 15 gymnasts, including 2 male gymnasts and 13 female gymnasts, recruited from the Gresik City Gymnastics Training Center. Data were collected using the Depression Anxiety Stress Scale (DASS-42) and the Dutch Eating Behavior Questionnaire (DEBQ). The statistical test used in this study was the Shapiro-Wilk test to determine the normality of the data. The Pearson correlation test was used to determine the relationship between depression, anxiety, and stress with emotional eating. The results of this study indicate that there is a relationship between anxiety and stress in gymnasts. This may be due to the psychological burden experienced by athletes during the run-up to the competition. However, the results of the relationship between emotional eating and anxiety and stress did not show a significant relationship. These results indicate that emotional eating is not an intervention carried out by gymnasts when they experience anxiety and stress. This study concludes that it is very important to use appropriate interventions when athletes experience psychological stress. Athletes need a support system that can provide them with mental well-being. Further research is expected to explore more about the long-term impacts and the use of larger and more diverse samples.

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AUTHORS' CONTRIBUTION

A. Conception and design of the study;
B. Acquisition of data;
C. Analysis and interpretation of data;
D. Manuscript preparation;
E. Obtaining funding

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INTRODUCTION

Athletes not only experience physical stress but also psychological stress during their efforts to achieve optimal performance (Endo et al., 2023). The stress that athletes often experience is caused by high expectations that arise from themselves, their coaches, and their external environment which can ultimately hurt their mental health (Daley et al., 2023; Poucher et al., 2023). Common psychological problems faced by athletes, especially gymnasts during the preparation phase of competition include



anxiety, depression, and stress (Nicholls & Levy, 2016). The problems experienced not only disrupt the mental health of athletes but also disrupt their best performance during competitions (Rozsnyai et al., 2021). As a form of response to the pressure being experienced by an athlete, emotional eating is a form of coping that occurs when stressed and anxious (Arslan Kabasakal et al., 2024).

The application of emotional eating carried out by athletes aims to reduce the level of stress faced. Previous research has shown that emotional eating is a form of non-adaptive coping (Lundstrom et al., 2024; Zorzi & Zandonai, 2024). Even though they only eat, excessive eating behaviour and eating unhealthy foods can trigger the impact of metabolic disorders, poor physical conditions such as sudden weight gain, and potentially decreased athletic performance (Kussman & Choo, 2024; Patel et al., 2024).

The problems that occur in these athletes are becoming increasingly important to be understood by coaches and their surroundings because their impact can affect eating behaviour and are also related to the mindset and psychological health of athletes. Therefore, an understanding is needed to address the relationship between anxiety, depression, stress, and emotional eating. Not only that, the right intervention to help athletes manage anxiety and stress, which often do emotional eating as a coping mechanism (Trigueros et al., 2020).

This study aims to expand the understanding of sports psychology with an interactive approach between the main psychological factors faced by gymnasts against emotional eating. Thus, by understanding the psychological challenges experienced by gymnasts, this study is expected to provide better insight into ways to support the mental and physical well-being of athletes and help them manage stress and anxiety more healthily.

METHODS

Participants

All data for this study were obtained from athletes at the Gresik City Gymnastics Training Center, with a total sample size of (N = 15), consisting of males (N = 2) and females (N = 13). The mean age of the participants as a whole can be seen in Table 1 below, which presents the sociodemographic characteristics of the participants.

Table 1.
Sociodemographic Characteristics

Group	N	Mean	St. Dev
Age (Years)	15	16,49	2,9
Body Weight (Kg)	15	52	6,1
Body Height (Cm)	15	165	4,2
Start Actively (Years)	15	6	1,7

Questionnaire

Depression Anxiety Stress Scales (DASS 42)

This study used a questionnaire developed by Holzapfel, (2025) the Depression Anxiety Stress Scales (DASS). This questionnaire has 42 items of questions which are

divided into three different subscales, namely depression, anxiety, and stress. The scoring scheme for each subdimension is presented in Table 2.

Table 2.
 Depression Anxiety Stress Scales (DASS-42) Performance Rating Scale

	Depression	Anxiety	Stress
Normal	0 - 9	0 - 7	0 - 14
Mild	10 - 13	8 - 9	15 - 18
Moderate	14 - 20	10 - 14	19 - 25
Severe	21 - 27	15 - 19	26 - 33
Extremely Severe	28 - 42	20 - 42	34 - 42

Dutch Eating Behavior Questionnaire (DEBQ)

The Dutch Eating Behavior Questionnaire (DEBQ), developed by van Strien et al., (1986) has been widely utilized in research to assess the level of emotional eating behaviour. This questionnaire consists of multiple items evaluated using a Likert scale to reflect the frequency and intensity of specific eating habits.

Statistics

The statistical analysis of this study was conducted using JASP software. Descriptive statistics, including sample size, mean, and standard deviation, were reported. Data normality was assessed using the Shapiro-Wilk test with a significance level of $p > 0.05$. Before conducting correlation analysis, the homogeneity of variance was tested using Levene's test. Pearson's correlation test was employed to examine the relationships between variables.

RESULTS AND DISCUSSION

Table 3.
 Mean Results and Normality Test

Parameters	N	Mean±St.Dev	Shapiro-Wilk
Anxiety	15	12,60±4,54	0,927
Depression	15	14,66±4,53	0,975
Stress	15	12,06±3,84	0,963
Emotional Eating	15	27,66±11,46	0,912

The results of the table above show that all parameters are normally distributed with a value of >0.05 , which meets the assumption of normality. So that it can continue the next statistical test, which allows for stronger and more valid data analysis.

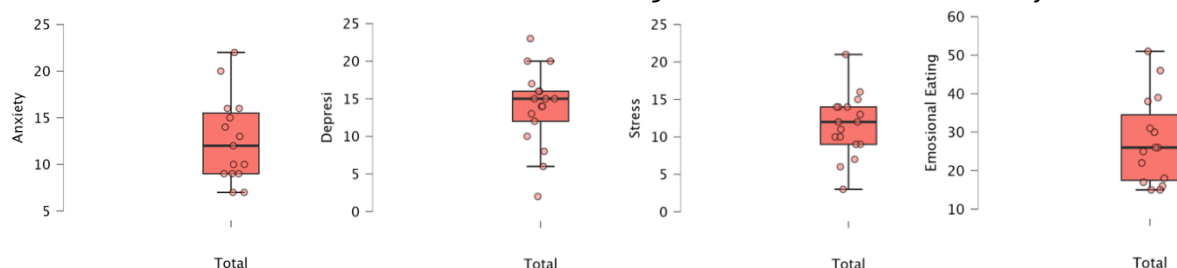


Figure 1.

Mean Results and Normality Test on Anxiety, Depression, Stress and Emotional Eating

Table 4.
 Pearson's Test Results

Parameters	Test	Anxiety	Depression	Stress
Depresi	Pearson's r	0,673	-	-
	P-value	0,006	-	-
Stress	Pearson's r	0,892	0,682	-
	P-value	<,001	0,005	-
Emotional Eating	Pearson's r	0,167	0,259	0,145
	P-value	0,552	0,351	0,607

This study aims to examine the levels of anxiety, depression, and stress, as well as their relationship with emotional eating among gymnasts in Gresik in preparation for the Porprov IX East Java 2025 Championship. The results indicate a strong correlation between anxiety and stress. Athletes experiencing high levels of anxiety often also exhibit high levels of stress (Park et al., 2020). This reflects the psychological reactions that arise due to competitive pressure. Athletes enduring prolonged emotional tension may experience negative impacts on both their mental and physical health (Marín-González et al., 2022).

The impact of depression experienced by athletes not only lowers motivation but also exacerbates levels of anxiety and stress (Beltrán et al., 2024). Athletes who experience depression often feel incapable of meeting the demands they face, which further intensifies feelings of anxiety and pressure (Rice et al., 2016; Souter et al., 2018). While depression is related to stress levels, this study indicates that there is no significant relationship between depression and emotional eating. This can be caused by various factors such as the coping that each athlete does. Perhaps some athletes use better strategies, such as consulting psychological therapy and seeking social support (Simons & Bird, 2023). However, the stress they experience can influence their tendency to engage in emotional eating.

Although anxiety and stress are often considered to be the primary influences on emotional eating, the results of this study suggest that not all athletes experiencing anxiety and stress engage in eating as a way to cope with stress and anxiety. Some athletes may have calmer and healthier strategies for dealing with anxiety and stress by communicating with friends and coaches and practising breathing (Nuetzel, 2023; Tossici et al., 2024). Although stress and anxiety can affect the psychological health of athletes, not all athletes practice emotional eating. This is very important to understand so that coaches or people around them when approaching individuals understand how athletes manage stress levels and mental pressure. It is important to remember that although depression, stress, and anxiety do not have a relationship between emotional eating in athletes this does not play a role in athletes' eating behavior. However, on the contrary, this study found that emotional eating may be more influenced by other factors such as lack of social support, lifestyle, and individual eating patterns during preparation for competition. Athletes who have good support during training sessions both in terms of coaches and their teammates will be more easily prepared to manage stress and anxiety without doing emotional eating.

CONCLUSION

This study concluded that in Gresik city gymnastics athletes in preparation for the IX East Java Porprov competition, there was a relationship between anxiety and stress. Another finding in this study was that psychological stress was closely related to increased anxiety. However, in this study, the researcher did not find any relationship between psychological factors and emotional eating. So this study shows that not all athletes when feeling stressed and anxious do emotional eating as a form of coping.

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