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Distinctive Emotional Traits Among Final-year Secondary School Students During Individual Physical and Sports Activities Examinations

السمات الإنفعالية المميزة لدى تلاميذة الأقسام النهائية في إمتحانات الأنشطة البدنية الرياضية الفردية

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Abstract:

The main objective of the study is to examine the most important psychological characteristics that distinguish final-year secondary school students during examinations in individual physical and sports activities. It also seeks to determine the hierarchical order and relative importance of these traits, as well as to investigate the impact of certain factors and variables on their emergence, such as gender, experience, and the nature of practice. The Emotional Traits Scale, with all its dimensions, was distributed to a sample of 273 male and female students enrolled in secondary schools in the southeastern region of Chlef Province. After that, the data collected were analyzed quantitatively and qualitatively using the 20th version of SPSS. The findings of the study led to a composition that included all core emotional traits associated with sports activity, expressed at varying levels, ranging from moderate to high, with the traits ranked as follows: self-confidence, self-control, desire, perseverance, personal responsibility, stress management, and sensitivity. Finally, the study concluded the following:

- There were statistically significant differences in the dimensions of the Emotional Traits Scale according to the gender variable in favor of males, only for the trait of sensitivity. Additionally, there were no differences found according to the experience variable.

- Statistically significant differences were identified according to the nature of practice variable in the trait of sensitivity only, in favor of students whose engagement extended beyond regular physical education classes.

Keywords: Emotional traits; Gender differences; Individual physical and sports examinations

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1. Introduction

The progress that the sports field has seen mirrors advancement in all physical and sports activities, as it provides comprehensive training for practitioners of all categories, including adolescents. In order to improve performance levels, it is necessary to study the emotional characteristics of adolescents to understand their traits and what distinguishes them. This can be achieved through the application of validated psychological measures specifically designed to assess affective traits. Moreover, emotional traits have a profound influence on the life of the athlete, since they are linked to their personality, behavior, motivations, needs, and the types of activities they engage in. There are no types of sports that are not colored by emotion (Hassan Allawi, 2004, p. 353). They represent one of the aspects of personality that can be measured to determine its characteristics, meaning that the affective traits that characterize emotional behavior represent the general style of personality effectiveness, giving a variety of specific responses (Hassan Allawi, 1998, p. 34).

Additionally, emotional traits are considered fundamental components of an athlete's personality, given their decisive role in directing behavior and regulating psychological responses in stressful situations, particularly within competitive and evaluative contexts. Recent literature in sports psychology indicates that these traits are not transient emotional states, but rather semi-permanent characteristics that directly affect performance quality and control of emotional behavior. Also, it should be noted that emotions run high in sports competitions, which are characterized by their intensity that builds excitement quickly and alters how athletes perform under pressure, depending on their degree. On top of that, they greatly affect the athlete's personality, requiring them to control their emotions and learn to subdue them (Hassan Allawi, 1971, 261-276).

Our discussion of athletic competition may take other parallel turns. For example, the field of championships and elite athletes is mirrored in the field of school education, where competition takes the form of official, competitive exams and tests. From our experience as physical education and sports teachers, examiners, and supervisors, we frequently observe noticeable anxiety, imbalance, and psychological instability among students during examinations. The truth is that exams are situations and experiences that carry with them many emotional responses that govern all of the student's behavior and performance during exam periods. This was supported by M.M. Maythem Saleh Karim (2008), who emphasized the existence of certain emotional traits in various sports, whether group or individual, and noted that certain activities may exhibit stronger manifestations of specific traits than others. Similarly, Kelly (1976) identified gender differences in perseverance and assertiveness in favor of males, whereas other studies pointed to the same trait in favor of females (Raghdaa Ali, 2010, 17). Thus, Kane (1978) emphasized the importance of understanding the emotional content of sports performance as a means of enhancing athletic development (Kane, 1978, p. 201). Emotional responses, therefore, must be regulated and systematically trained in alignment with physical and technical preparation (Salmela, 1980, p. 6). However, physical, technical, and tactical preparation alone are insufficient for achieving excellence since psychological preparation has become indispensable as an educational process aimed at shaping and developing athletes'

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motivations and attitudes, in addition to providing guidance and direction (Mohamed Ali, 2005, p. 492).

In this regard, recent studies on Trait Emotional Intelligence have confirmed that its dimensions, particularly self-control, self-confidence, and stress management, are positively associated with performance in competitive situations, especially in individual sports that require sustained psychological resilience and internal regulation. A recent large-scale study of more than 600 athletes from different sports disciplines showed that athletes in individual activities score higher on psychological well-being and self-control than others, reflecting the sensitivity of these activities to emotional stress (BMC Psychology, 2025).

Similarly, studies published in Frontiers in Psychology indicate that emotional traits are closely linked to intrinsic motivation. Traits such as self-confidence, desire, and determination increase the ability to cope with the psychological pressures associated with performance, especially in situations characterized by formal evaluation and fear of failure, such as practical examinations (Frontiers in Psychology, 2025).

From another perspective, the results of studies published in Scientific Reports suggest that the emotional responses to performance cannot be explained by a single factor, but are rather the result of a complex interaction between personality traits, psychological skills, and situational demands. These studies concluded that individuals with high levels of self-control and emotion regulation show more stable performance in stressful situations compared to those with high emotional sensitivity (Scientific Reports, 2026).

Therefore, examinations in individual physical and sports activities within the school setting can be regarded as high emotional-load evaluative situations that require students employ a set of emotional traits to ensure optimal performance, which makes studying them both an educational and psychological necessity. In light of the above mentioned, the present study was designed as a systematic, scientific, and practical attempt to identify the most important emotional traits that characterize final-grade secondary school students during examinations in individual physical and sports activities. It also seeks to determine their hierarchical order and relative importance, as well as to examine the influence of selected variables, which are gender, experience, and the nature of practice.

Research Question

- What are the distinctive emotional traits exhibited by final-year secondary school students during examinations in individual physical and sports activities?

Sub-Questions

Based on our general question, we pose a series of sub-questions, which we will attempt to answer through our study, as follows:

- What is the order of emotional characteristics among students in exams according to importance?
- Are there differences in the dimensions of the Emotional Traits Scale according to gender?
- Are there differences in the dimensions of the Emotional Traits Scale according to experience?

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- Are there differences in the dimensions of the Emotional Traits Scale according to the nature of practice?

2. Research Methodology

2.1 Research Design

The study employed a descriptive analytical approach due to its suitability for the nature and objectives of the research.

2.2 Research Sample

The current study initially targeted a sample of 300 final-year secondary school students. Of these, 275 questionnaires were deemed valid for statistical analysis, as a number of forms could not be retrieved during the primary data collection phase. Consequently, the final sample consisted of 275 male and female students, who were selected using a stratified random sampling technique. Specifically, 50 students were drawn from each educational institution included in the field study.

2.3 Research Instrument

Data were collected using the Emotional Traits Scale in Sports. The scale included 42 statements that measure 7 different emotional traits, with each dimension assessed through six items. Half of the items within each dimension are positively set, while the remaining half are negatively keyed to control response bias (total scale score = 210 points).

The seven measured dimensions are as follows:

Dimension 01: Desire (Motivation)
Dimension 02: Perseverance
Dimension 03: Sensitivity
Dimension 04: Stress Management
Dimension 05: Confidence
Dimension 06: Personal Responsibility
Dimension 07: Self-control

2.4 Statistical Analysis

To analyze the data, arithmetic means and standard deviations were calculated, and an independent samples *t*-test was used to examine differences across the selected variables, in addition to relative weight percentages. All statistical analyses were conducted using SPSS software (Version 20).

3. Presentation and Discussion of the Findings

Table 1: Arithmetic means, standard deviations, and relative weights for each of the seven dimensions of the Emotional Traits Scale, along with the total score.

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Emotional Trait	Mean	Std. Deviation	Relative Weight (%)	Rank
Desire (Motivation)	19.71	±3.857	65.70%	3
Perseverance	19.31	±2.832	64.36%	4
Sensitivity	17.60	±3.807	58.66%	7
Stress Management	19.62	±3.723	58.86%	6
Confidence	21.55	±4.048	71.83%	1
Personal Responsibility	18.75	±3.493	62.50%	5
Self-Control	20.75	±3.607	69.13%	2
Total Score	**137.28**	**±10.422**	**65.37%**	/

3.1 Testing the First Hypothesis

The first hypothesis stated that emotional traits follow a specific hierarchical order in individual physical and sports tests. The results confirmed this order, with self-confidence ranking first, followed by Self-Control second, and Motivation third, with relative weights estimated at 71.83%, 69.13%, and 65.70%, respectively. These three traits were classified at a superior and acceptable level, placing them in the first classification tier. Subsequently, the Perseverance trait ranked fourth with a relative weight of 64.36%, and Personal Responsibility after it in fifth place (62.50%), reflecting an average level and falling within the second class. Finally, Stress Control ranked sixth and Sensitivity came seventh, with relative weights of 58.86% and 58.66%, placing them within the below-average classification category.

The results of the current study showed that self-confidence came in first place, followed by self-control, then desire (motivation), which reflects the ability of final-year students to control their emotional behavior during individual physical and sports activities exams. These results are consistent with the findings of recent foreign studies, which confirmed that self-confidence and self-control are the cornerstones of successful performance in individual competitive situations, where the individual is directly responsible for their performance without relying on the group. Furthermore, these findings align with a study published in BMC Psychology (2025), which showed that athletes with higher levels of Trait Emotional Intelligence, especially in the dimensions of self-control and psychological well-being, have a greater ability to cope with the emotional pressure

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associated with competitions, which explains why these two traits rank highest in the current study sample.

Table 2: Results of the *t*-test for the difference in scale dimensions according to gender.

Dimensions	Males (n=111)		Females (n=162)		Mean Difference	*T*-value	Sig.
	Mean	St. Dev.	Mean	St. Dev.			
Desire	19.60	3.401	19.78	4.149	0.18	3.499	.062
Perseverance	19.63	2.815	19.09	2.831	0.54	.064	.801
Sensitivity	16.73	3.292	18.19	4.026	1.46 -	8.492	.004
Stress Management	20.21	3.545	19.21	3.798	1	1.803	.181
Self-Confidence	22.02	3.852	21.23	4.159	0.79	.036	.850
Personal-Responsibility	18.82	3.393	18.70	3.570	0.12	.306	.581
Self-Control	20.44	3.335	20.96	3.778	0.52 -	1.056	.305
Total	**137.4**	**9.956**	**137.1**	**10.75**	**0.3**	**1.262**	**.262**

3.2 Testing the Second Hypothesis

The second hypothesis assumed the existence of statistically significant differences in the dimensions of the Emotional Traits Scale among students according to the gender variable. The results revealed that there was no statistical significance in all dimensions of the Emotional Traits Scale and the scale as a whole, with the exception of the Sensitivity Trait, knowing that the levels of significance were estimated successively at 0.062, 0.801, 0.181, 0.850, 0.581, 0.305, and 0.262. Therefore, this indicates that there are no statistically significant differences according to gender, i.e., between males and females in the traits of Desire, Perseverance, Stress Management, Self-Confidence, Personal Responsibility, and Self-Control. However, a statistically significant difference was identified in the Sensitivity Trait ($p = 0.004$). The calculated t-value was statistically meaningful, and the difference was in favor of female students, indicating higher levels of emotional sensitivity among females compared to males.

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Moreover, the study's findings demonstrated no statistically significant differences between males and females in most dimensions of emotional traits, except for the Sensitivity Trait, which favored females. This result can be explained in light of recent psychological literature, where some studies show that females are more likely to respond emotionally to formal evaluative situations as a result of higher levels of emotional sensitivity and anxiety associated with evaluation. Likewise, these results are also supported by recent research indicating that gender differences in affective traits do not appear in regulatory dimensions (such as self-control and confidence) as much as they appear in affective dimensions associated with sensitivity and situational stimuli (Frontiers in Psychology, 2025).

Table 3: *T*-test results for differences in scale dimensions according to the experience variable (number of times repeating the school year)

Dimensions	One Time (n=225)		More Than Once (n=48)		Mean Difference	*T*-value	Sig.
	Mean	St. Dev.	Mean	St. Dev.			
Desire	19.86	3.912	19.00	3.543	0.86	1.993	.159
Perseverance	19.35	2.853	19.13	2.757	0.22	.002	.968
Sensitivity	17.64	3.821	17.42	3.775	0.22	.166	.684
Stress Management	19.70	3.792	19.21	3.389	0.49	.492	.484
Self-Confidence	21.44	4.164	22.06	3.448	0.13	1.414	.235
Personal-Responsibility	18.86	3.411	18.23	3.850	0.63	.995	.319
Self-Control	20.80	3.615	20.54	3.602	0.26	.035	.851
Total	**137.64**	**10.593**	**135.58**	**9.495**	**2.02**	**.648**	**.422**

3.3 Testing the Third Hypothesis

The third hypothesis proposed that statistically significant differences exist in the dimensions of the Emotional Traits Scale according to the experience variable (number of grade repetitions). The findings showed that there was no statistical significance in all dimensions of the emotional scale or the overall score. The corresponding significance levels were 0.159, 0.968, 0.684, 0.484, 0.235, 0.319, 0.851, and 0.422, which indicates that there are no statistically significant differences according to the experience variable. This

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means that students who repeated more than one academic year and students who did not repeat any academic year are similar in all affective traits as well as in the scale as a whole.

Furthermore, the lack of statistically significant differences based on experience is consistent with recent studies confirming that repeated exposure to evaluative situations does not necessarily lead to improvement in emotional traits unless accompanied by systematic psychological preparation.

Table 4: Results of the t-test for differences in scale dimensions according to the nature of practice variable.

Dimensions	P.E Session Only (n=181)		Beyond P.E Session (n=92)		Mean Difference	*T*-value	Sig.
	Mean	St. Dev.	Mean	St. Dev.			
Desire	19.64	3.873	19.84	3.844	0.16	.119	.731
Perseverance	19.25	2.840	19.42	2.829	0.17 -	.094	.759
Sensitivity	18.02	3.983	16.76	3.296	1.26	5.213	.023
Stress Management	19.49	3.809	19.86	3.557	0.37 -	.694	.405
Self-Confidence	21.30	4.048	22.05	4.023	0.75 -	.726	.395
Personal-Responsibility	18.86	3.587	18.54	3.310	0.32	1.146	.285
Self-Control	20.80	3.599	20.66	3.641	0.14	.007	.935
Total	**137.35**	**10.253**	**137.14**	**10.803**	**0.21**	**.699**	**.404**

4.3 Testing the Fourth Hypothesis

This hypothesis suggested that there are statistically significant differences in the dimensions of the Emotional Traits Scale among students according to the nature of practice. The study concluded that there was no statistical significance in all dimensions of the Emotional Traits Scale and the scale as a whole, except for the Sensitivity trait, knowing that the levels of significance were estimated at 0.731, 0.759, 0.405, 0.395, 0.285, 0.935, and 0.404, respectively. Accordingly, no statistically significant differences were found between students whose practice was limited to Physical Education and Sports (P.E.) sessions and those whose practice extended beyond P.E. sessions in terms of: Desire, Perseverance, Stress Management, Self-Confidence, Personal Responsibility, and Self-Control. On the other

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hand, in the Sensitivity trait, a statistically significant difference was identified in favor of students whose exercise was limited to PE classes over those whose exercise exceeded PE classes, with a significance level of 0.004.

This can be explained according to the findings of recent research studies published in Scientific Reports (2026), which showed that the absence of external competitive practice deprives individuals of opportunities for gradual emotional adaptation to stressful situations, hence raising the level of emotional sensitivity during formal assessment.

All in all, the results of the current study are consistent with the findings of Zahaf Mohamed (2009), who reported agreement among students in individual physical sports activities, especially the ones that require a short period of time to perform, such as shot put and sprinting competitions, in demonstrating elevated levels of self-control, confidence, and perseverance. Despite that, it pointed to a difference in the ranking of some of those emotional traits among some students, such as stress control, personal responsibility, desire, and sensitivity.

4. Conclusions and Recommendations

- The study revealed that self-confidence, self-control, and desire were the most dominant emotional traits among final-year students during individual physical and sports activity examinations. This finding aligns with recent research indicating that these dimensions of Trait Emotional Intelligence directly affect emotional control and individual sports performance (Kopp & Jekauc, 2025; Qi, 2025).

- No statistically significant differences were found between males and females in most emotional traits, except for sensitivity, which was higher in females, reflecting a higher emotional response in formal situations. This is consistent with the latest research addressing gender differences in Emotional Intelligence dimensions related to sensitivity and affective reaction (Solmaz & Şimşek, 2025).

- The experience variable (number of grade repetitions) did not significantly affect emotional traits. This indicates that repeated exposure to practical examinations alone does not necessarily enhance emotional characteristics, but rather requires organized educational and psychological intervention (Lepers et al., 2025).

- Statistically significant differences were identified in the Sensitivity Trait according to the nature of practice, with higher levels among students whose practice was limited to school physical education classes. This may be explained by the absence of gradual adaptation to pressure situations typically encountered in external competitive practice, which is supported by recent studies linking the nature of practice and training to emotional control (Frontiers in Psychology, 2025).

- The study confirms that physical and technical preparation alone is not sufficient to achieve optimal performance in practical exams, and that the development of emotional traits is a decisive factor in improving results and adapting to competitive situations.

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Based on the findings of the present study, the following recommendations are proposed:

- Develop training programs to teach emotional restraint, self-confidence, and self-control skills within school classes, rather than focusing solely on the physical aspect.

- Raise awareness and train physical education teachers regarding the importance of emotional traits and their impact on performance, and ways to support students in controlling their emotions during practical exams.

- Incorporate additional sports activities and practices outside of formal classes to enhance the ability to adapt emotionally to stressful situations and evaluations.

- Employ modern, reliable assessment tools to regularly assess emotional traits and link the results to improved individual performance and psychological adaptation.

- Conduct comparative studies between individual and team sports to explore differences in emotional traits and examine their impact on performance.

- Investigate the effect of continuous psychological preparation programs on improving both emotional performance and skill development among students.

- Expand the study to include different educational stages to monitor the development of emotional traits over the long term.

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