

**INVESTIGATION OF MENTAL TOUGHNESS AND ACADEMIC COURAGE  
LEVELS OF UNIVERSITY STUDENTS BASED ON SOME PARAMETERS**

**INVESTIGAÇÃO DOS NÍVEIS DE RESILIÊNCIA PSICOLÓGICA E CORAGEM  
ACADÊMICA DE ESTUDANTES UNIVERSITÁRIOS COM BASE EM  
DETERMINADOS PARÂMETROS**

**INVESTIGACIÓN SOBRE LOS NIVELES DE RESISTENCIA PSICOLÓGICA Y  
VALENTÍA ACADÉMICA DE LOS ESTUDIANTES UNIVERSITARIOS A PARTIR DE  
DETERMINADOS PARÁMETROS**



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**ABSTRACT:** This study investigates the levels of mental toughness and academic courage among university students in connection with certain parameters. The Sports Mental Toughness Inventory and Academic Courage Scale were used in this study. While performing the statistical analysis, independent t-tests, one-way ANOVA, and LSD tests were used. University students' mental toughness levels differed significantly based on gender ( $p < 0.001$ ) while there was also a significant difference in commitment, control, and total mental toughness scores across age categories, with the exception of the confidence sub-dimension ( $p < 0.05$ ). Athlete students in the Faculty of Sport Sciences showed substantial differences in mental toughness across confidence, control, and commitment sub-dimensions, as well as total score, based on their years of sports experience ( $p < 0.05$  and  $p < 0.001$ ). It is suggested that this study be conducted with a bigger sample size, including students who receive and do not receive sports instruction from various universities.

**KEYWORDS:** Academic courage. Mental toughness. Gender. University students. Sports Experience.

**RESUMO:** Este estudo investiga os níveis de resiliência psicológica e coragem acadêmica de estudantes universitários em relação a determinados parâmetros. Foram utilizados o Inventário de Resiliência Psicológica no Esporte e a Escala de Coragem Acadêmica. Para a análise estatística, foram empregados teste t para amostras independentes, ANOVA unidirecional e teste LSD. Os níveis de resiliência psicológica diferiram significativamente segundo o gênero ( $p < 0,001$ ), e também houve diferenças em comprometimento, controle e escore total entre categorias de idade, exceto na subdimensão confiança ( $p < 0,05$ ). Estudantes atletas da Faculdade de Ciências do Esporte apresentaram diferenças significativas na resiliência psicológica segundo os anos de experiência esportiva ( $p < 0,05$  e  $p < 0,001$ ). Recomenda-se ampliar a amostra, incluindo estudantes de diferentes universidades, com e sem formação esportiva.

**PALAVRAS-CHAVE:** Coragem acadêmica. Resiliência psicológica. Gênero. Estudantes universitários. Experiência esportiva.

**RESUMEN:** Este estudio investiga los niveles de resistencia psicológica y valentía académica de estudiantes universitarios en relación con determinados parámetros. Se utilizaron el Inventario de Resistencia Psicológica en el Deporte y la Escala de Valentía Académica. Para el análisis estadístico se emplearon la prueba t para muestras independientes, ANOVA de una vía y prueba LSD. Los niveles de resistencia psicológica difirieron significativamente según el género ( $p < 0,001$ ), y también se observaron diferencias en compromiso, control y puntuación total entre categorías de edad, excepto en la subdimensión confianza ( $p < 0,05$ ). Los estudiantes atletas de la Facultad de Ciencias del Deporte mostraron diferencias significativas en resistencia psicológica según los años de experiencia deportiva ( $p < 0,05$  y  $p < 0,001$ ). Se recomienda ampliar la muestra, incluyendo estudiantes de distintas universidades, con y sin formación deportiva.

**PALABRAS CLAVE:** Valentía académica. Resistencia psicológica. Gênero. Estudantes universitarios. Experiencia deportiva.

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## INTRODUCTION

Mental toughness in sports is defined as athletes' ability to enjoy stress and strain in competitive and stressful situations, recuperate, maintain confidence, and perform at peak levels despite all odds (Jones et al., 2007). Mentally strong athletes are more competitive, determined, and capable of motivating themselves under pressure, thereby sustaining and increasing their motivation. They have a tendency to maintain high levels of self-esteem even after failure (Crust & Clough, 2011). When it comes to physical parity, one of the most important factors for success is mental toughness (Graham et al. 2002). Athletes must retain mental toughness in the face of negative emotions including underperformance, discomfort, and stress in the athletic environment (Altıntaş, 2015).

Mental toughness is divided into four components: control, challenge, commitment, and confidence. Confidence is having faith in one's own talents while not allowing opponents to frighten them. Individuals with a sense of confidence have the ability to complete tasks, accept responsibility, engage in activities, believe in their abilities, and have trust in the ability to defeat an opponent even in tough conditions (Güvendi et al., 2018). Commitment can be defined as an athlete's capacity to take ownership of their own goals, concentrate, and fight (Güvendi et al., 2018). Challenge is to recognize possible risks in continuously changing circumstances and turn them into opportunities for personal progress. Commitment is the continual endeavor to succeed despite obstacles on the route to our goals. It is described as the concept that people can steer the events they face in the desired direction. Control is the ability to manage several tasks while maintaining self-control. While coaches and scientists understand the relevance of mental toughness for peak performance, researchers have only just begun to pay close attention to this enigmatic phenomenon (Cesur, 2019). According to studies, an athlete's mental toughness correlates with their performance level (Tran, 2021). According to a study by Aditya et al. (2024), mental toughness is important for coping with stress and strain during sports tasks.

Altıntaş (2023) defines courage as the willingness to take chances, tackle difficult tasks, and persevere in the face of adversity. Courage has been linked to a variety of organizational variables, including employee well-being, corporate social responsibility and loyalty, social support, ethical leadership, team collaboration, organizational citizenship behavior, and job performance. More than 50 different varieties of courage have been found, ranging from broadly recognized forms like physical courage, moral courage, and social courage to more specialized distinctions like emotional courage, praise courage, and intellectual courage (Mert, 2024). Creative courage, which is more prevalent in intellectual and artistic pursuits, allows

people to push limits and explore new ideas (Glade-Wright & Smyth, 2023). Courage is linked to favorable adaptation outcomes in both kids and adults, including general self-efficacy, work satisfaction, career persistence, and positive affect (Crede et al., 2017). It is likely that courage responds to school-based interventions, hence improving student accomplishment. As a result, ideas for school-based treatments that promote student courage are emerging (Kirchgasler, 2018).

Over the last decade, courage has been related to academic success among children, adolescents, and college students. Numerous empirical research have found a link between courage and academic achievement in college-aged populations (Strayhorn, 2014; Wolters & Hussain, 2015). Furthermore, academic courage has shown incremental validity over and beyond generic courage. According to Clark and Malecki (2019), courage may play a significant role in predicting academic achievement among adolescents. Sport courage is especially linked to self-confidence, risk-taking, assertiveness, mastery, altruistic behavior, and determination in situations viewed as somewhat risky by the athlete (Konter, 2013).

In today's changing and expanding educational environment, the significance of psychological elements influencing university students' academic success is growing. In this setting, mental toughness and academic courage are important for students' ability to cope with challenges, their attitudes towards learning, and the coping strategies they acquire to deal with the stressors they face in their academic lives. Individuals with high mental toughness are more resilient to academic challenges, but pupils with high academic courage are eager to learn and willing to take academic risks despite their fear of making mistakes.

Understanding how these two notions change across demographic and individual variables is critical for enhancing educational environments and designing student support programs. As a result, this study evaluates university students' mental toughness and academic courage levels using particular metrics, with the goal of contributing to the field of education through its findings.

In this article, the use of a mental toughness measure originally developed in the field of sport is not treated as a direct conversion of athletic performance into academic performance. Rather, it is used as an analytical bridge for examining whether psychological resources commonly discussed in sport sciences—especially confidence, control and commitment—can help interpret how university students face academic demands, uncertainty, risk of failure and persistence in learning contexts. This transposition is justified because university students who are also athletes experience both sport-related and academic pressures; however, it requires

conceptual caution, since academic courage is a construct linked specifically to educational participation, willingness to take academic risks and engagement with learning tasks.

For this reason, the study does not assume that mental toughness and academic courage are equivalent constructs. Instead, it asks whether they vary according to demographic and sport-related parameters and whether they are statistically associated in this sample. The research questions guiding the study are: (i) What are the levels of mental toughness and academic courage among university students enrolled in a Faculty of Sport Sciences? (ii) Do mental toughness and academic courage differ according to gender, age, years of sports experience, type of sport and amateur or professional/national status? (iii) Is there a significant relationship between the sub-dimensions of sport mental toughness and academic courage?

Accordingly, the objective of the study is to investigate mental toughness and academic courage levels among university students and to examine whether a sports-derived psychological construct offers interpretive value for understanding academic dispositions in a higher education context. The expected contribution is not to replace educational indicators with sport performance metrics, but to test the limits and possibilities of dialogue between sport psychology and educational research, especially for the design of student support strategies aimed at persistence, confidence and coping with academic challenges.

## METHOD

The study included students from Ondokuz Mayıs University's Yaşar Doğu Faculty of Sports Sciences who competed in amateur or professional/national contests. All students were chosen from among those studying at the Faculty of Sports Sciences and competing in events. Students ranged in age from 18 to 30; 114 students were female, 135 were male.

### *Data collection tools*

In addition to the personal information form, Altıntaş's 2015 "Mental Toughness Inventory in Sports" and "Academic Courage Scale" was used to collect data. Questionnaires that were not completely answered were excluded from the evaluation.

The Mental Toughness Inventory in Sports was developed by Sheard et al. (2009); it consists of 3 sub-dimensions and 14 items. The Turkish adaptation of the inventory was categorized into confidence (items 1, 5, 6, 11, 13, and 14), control (items 2, 4, 7, and 9), and commitment (items 3, 8, 10, and 12) by Altıntaş and Bayar-Koruç (2017). It is scored on a 4-

point Likert scale (1 = completely false; 4 = completely true). Based on the examinations, the items of the confidence dimension and items 3 and 12 are scored this way, while the other items should be scored the opposite way. The possible scores from the scale range from 14 to 56. The internal consistency coefficients obtained for all participants in this study were 0.85 for the “Confidence” sub-dimension, 0.80 for the “Control” sub-dimension, and 0.53 for the “Commitment” sub-dimension.

The Academic Courage Scale, developed by Okur et al. (2023), measures academic motivation and courage and has two sub-dimensions and a total of 10 items. The sub-dimensions are listed as challenge-focused encouragement (first 5 items) and potential-focused encouragement (items 6, 7, 8, 9, and 10). It is a rating scale and has a 6-point rating (1 = Very wrong in my opinion, 2 = Wrong in my opinion, 3 = Somewhat wrong in my opinion, 4 = Somewhat right in my opinion, 5 = Right in my opinion, 6 = Very right in my opinion). The scale does not have a reverse item. The minimum potential score is 10 and the maximum is 60. Higher scores on this scale mean that participants are more encouraged academically. Higher average scores reflect higher academic courage (Clark & Malecki, 2019). The scale reliability coefficient of the data was found to be 0.93.

The study employed SPSS 27.00 package program for statistical analysis. The Kolmogorov-Smirnov test was performed to test whether the data were normally distributed, resulting in the conclusion that the data were normally distributed. The independent samples t-test was applied for comparisons of paired groups, and one-way analysis of variance (ANOVA) and LSD tests were used for comparisons of more than two groups.

In the ethical sense, the decision numbered 2025-681 was made in accordance with the title of “Investigation of Mental Toughness and Courage Levels of University Students” at the meeting numbered 5, dated 30.05.2025, of the Ondokuz Mayıs University Social and Human Sciences Research Ethics Committee.

## FINDINGS

**Table 1.**  
*Comparison of Mental Toughness of University Students by Gender*

| Scales and Dimensions | Gender | N   | Mean  | Standard Deviation | t      | p        |
|-----------------------|--------|-----|-------|--------------------|--------|----------|
| Confidence            | Female | 114 | 17,19 | 2,23               | -10,12 | <0,001** |
|                       | Male   | 135 | 20,23 | 2,47               |        |          |
| Commitment            | Female | 114 | 10,93 | 2,19               | -4,70  | <0,001** |
|                       | Male   | 135 | 12,47 | 2,86               |        |          |
| Control               | Female | 114 | 11,73 | 1,55               | -6,62  | <0,001** |
|                       | Male   | 135 | 13,16 | 1,81               |        |          |

|                                 |        |     |       |      |       |          |
|---------------------------------|--------|-----|-------|------|-------|----------|
| Mental Toughness                | Female | 114 | 39,85 | 3,99 | -9,84 | <0,001** |
|                                 | Male   | 135 | 45,86 | 5,39 |       |          |
| Challenge-focused Encouragement | Female | 114 | 23,86 | 4,10 | 1,46  | 0,144    |
|                                 | Male   | 135 | 23,01 | 4,93 |       |          |
| Potential-focused Encouragement | Female | 114 | 23,12 | 4,14 | -0,26 | 0,748    |
|                                 | Male   | 135 | 23,27 | 4,62 |       |          |
| Academic Encouragement          | Female | 114 | 46,98 | 7,63 | 0,67  | 0,504    |
|                                 | Male   | 135 | 46,27 | 8,85 |       |          |

Note. The Authors.

A statistically significant difference was found in terms of mental toughness of university students based on gender ( $p < 0.001$ ). No statistically significant difference was found in terms of the sub-dimensions of academic encouragement and total scale scores based on gender ( $p > 0.05$ ).

**Table 2.**

*Comparison of Mental Toughness of University Students by Age Category*

| Scales and Dimensions           | Age category | n   | Mean  | Standard Deviation | F/LSD         | p      |
|---------------------------------|--------------|-----|-------|--------------------|---------------|--------|
| Confidence                      | 18-20 (1)    | 92  | 18,39 | 3,03               | 2,60          | 0,302  |
|                                 | 21-25 (2)    | 118 | 18,95 | 2,68               |               |        |
|                                 | 26-30 (3)    | 39  | 19,56 | 2,46               |               |        |
|                                 | Total        | 249 | 18,84 | 2,80               |               |        |
| Commitment                      | 18-20 (1)    | 92  | 11,24 | 2,62               | 4,31<br>3>1,2 | 0,014* |
|                                 | 21-25 (2)    | 118 | 11,87 | 2,60               |               |        |
|                                 | 26-30 (3)    | 39  | 12,69 | 2,82               |               |        |
|                                 | Total        | 249 | 11,77 | 2,68               |               |        |
| Control                         | 18-20 (1)    | 92  | 12,54 | 1,61               | 4,84<br>3>1,2 | 0,009* |
|                                 | 21-25 (2)    | 118 | 12,22 | 2,00               |               |        |
|                                 | 26-30 (3)    | 39  | 13,26 | 1,63               |               |        |
|                                 | Total        | 249 | 12,50 | 1,84               |               |        |
| Mental Toughness                | 18-20 (1)    | 92  | 42,17 | 4,99               | 4,95<br>3>1,2 | 0,008* |
|                                 | 21-25 (2)    | 118 | 43,04 | 5,87               |               |        |
|                                 | 26-30 (3)    | 39  | 45,51 | 5,88               |               |        |
|                                 | Total        | 249 | 43,11 | 5,65               |               |        |
| Challenge-focused Encouragement | 18-20 (1)    | 92  | 23,62 | 4,03               | 0,19          | 0,824  |
|                                 | 21-25 (2)    | 118 | 23,31 | 4,74               |               |        |
|                                 | 26-30 (3)    | 39  | 23,13 | 5,36               |               |        |
|                                 | Total        | 249 | 23,40 | 4,58               |               |        |
| Potential-focused Encouragement | 18-20 (1)    | 92  | 23,00 | 4,53               | 0,52          | 0,594  |
|                                 | 21-25 (2)    | 118 | 23,14 | 4,31               |               |        |
|                                 | 26-30 (3)    | 39  | 23,85 | 4,43               |               |        |
|                                 | Total        | 249 | 23,20 | 4,40               |               |        |
| Academic Encouragement          | 18-20 (1)    | 92  | 46,62 | 7,82               | 0,06          | 0,945  |
|                                 | 21-25 (2)    | 118 | 46,46 | 8,44               |               |        |
|                                 | 26-30 (3)    | 39  | 46,97 | 9,17               |               |        |
|                                 | Total        | 249 | 46,60 | 8,30               |               |        |

Note. The Authors. \* $p < 0.05$ .

A significant difference was found in terms of commitment, control, and total mental toughness scores of the students of the Faculty of Sports Sciences, excluding the confidence

dimension, based on their age category ( $p < 0.05$ ). No statistically significant difference was found in the sub-dimensions of academic encouragement and total scale scores based on age category ( $p > 0.05$ ).

**Table 3.***Comparison of Mental Toughness of University Students by Years of Sports Experience*

| Scales and Dimensions           | Years of Sports Experience | n   | Mean  | Standard Deviation | F/LSD | p        |
|---------------------------------|----------------------------|-----|-------|--------------------|-------|----------|
| Confidence                      | 4 years or less (1)        | 62  | 17,03 | 2,83               | 35,54 | <0,001** |
|                                 | 5-8 years (2)              | 83  | 18,41 | 2,07               | 1<2,3 |          |
|                                 | 9 years or more (3)        | 104 | 20,26 | 2,57               | 2<3   |          |
|                                 | Total                      | 249 | 18,84 | 2,80               |       |          |
| Commitment                      | 4 years or less (1)        | 62  | 10,53 | 2,16               | 9,44  | <0,001** |
|                                 | 5-8 years (2)              | 83  | 12,27 | 1,64               | 1<2,3 |          |
|                                 | 9 years or more (3)        | 104 | 12,11 | 3,34               |       |          |
|                                 | Total                      | 249 | 11,77 | 2,68               |       |          |
| Control                         | 4 years or less (1)        | 62  | 12,18 | 1,44               | 14,03 | <0,001** |
|                                 | 5-8 years (2)              | 83  | 11,89 | 1,75               | 1,2<3 |          |
|                                 | 9 years or more (3)        | 104 | 13,18 | 1,90               |       |          |
|                                 | Total                      | 249 | 12,50 | 1,84               |       |          |
| Mental Toughness                | 4 years or less (1)        | 62  | 39,74 | 4,84               | 25,18 | <0,001** |
|                                 | 5-8 years (2)              | 83  | 42,57 | 3,32               | 1<2,3 |          |
|                                 | 9 years or more (3)        | 104 | 45,55 | 6,42               | 2<3   |          |
|                                 | Total                      | 249 | 43,11 | 5,65               |       |          |
| Challenge-focused Encouragement | 4 years or less (1)        | 62  | 23,18 | 4,51               | 0,15  | 0,865    |
|                                 | 5-8 years (2)              | 83  | 23,59 | 4,13               |       |          |
|                                 | 9 years or more (3)        | 104 | 23,38 | 4,98               |       |          |
|                                 | Total                      | 249 | 23,40 | 4,58               |       |          |
| Potential-focused Encouragement | 4 years or less (1)        | 62  | 22,98 | 4,10               | 0,20  | 0,817    |
|                                 | 5-8 years (2)              | 83  | 23,11 | 4,44               |       |          |
|                                 | 9 years or more (3)        | 104 | 23,40 | 4,57               |       |          |
|                                 | Total                      | 249 | 23,20 | 4,40               |       |          |
| Academic Encouragement          | 4 years or less (1)        | 62  | 46,16 | 7,93               | 0,12  | 0,891    |
|                                 | 5-8 years (2)              | 83  | 46,70 | 7,81               |       |          |
|                                 | 9 years or more (3)        | 104 | 46,78 | 8,95               |       |          |
|                                 | Total                      | 249 | 46,60 | 8,30               |       |          |

Note. The Authors. \* $p < 0.05$  ve \*\* $p < 0.001$ .

University students' mental toughness differed significantly in terms of confidence, control, and commitment and the total scale score based on years of sports experience ( $p < 0.05$  and  $p < 0.001$ ). No significant differences were found in terms of the sub-dimensions of academic encouragement and total score based on years of sports experience ( $p > 0.05$ ).

**Table 4.***Comparison of Mental Toughness of University Students by Type of Sports*

| Scales and Dimensions | Type of Sports | N   | Mean  | Standard Deviation | t     | p       |
|-----------------------|----------------|-----|-------|--------------------|-------|---------|
| Confidence            | Individual     | 120 | 18,74 | 2,21               | -0,53 | 0,597   |
|                       | Team           | 129 | 18,93 | 3,27               |       |         |
| Commitment            | Individual     | 120 | 12,33 | 2,18               | 3,22  | 0,001** |

|                                 |            |     |       |      |       |       |
|---------------------------------|------------|-----|-------|------|-------|-------|
|                                 | Team       | 129 | 11,25 | 2,99 |       |       |
| Control                         | Individual | 120 | 12,29 | 1,83 | -1,75 | 0,081 |
|                                 | Team       | 129 | 12,70 | 1,83 |       |       |
| Mental Toughness                | Individual | 120 | 43,36 | 4,87 | 0,67  | 0,502 |
|                                 | Team       | 129 | 42,88 | 6,30 |       |       |
| Challenge-focused Encouragement | Individual | 120 | 23,94 | 4,90 | 1,81  | 0,070 |
|                                 | Team       | 129 | 22,89 | 4,22 |       |       |
| Potential-focused Encouragement | Individual | 120 | 23,26 | 4,69 | 0,20  | 0,843 |
|                                 | Team       | 129 | 23,15 | 4,13 |       |       |
| Academic Encouragement          | Individual | 120 | 47,20 | 8,83 | 1,10  | 0,271 |
|                                 | Team       | 129 | 46,04 | 7,78 |       |       |

Note. The Authors.

While there was a significance level of  $p < 0.001$  in terms of commitment of university students' mental toughness scores based on type of sports, no significant difference was found in confidence trust and control as well as in mental toughness ( $p > 0.05$ ). No significant difference was found in terms of the sub-dimensions of academic encouragement and total score based on type of sports ( $p > 0.05$ ).

**Table 5.**

*Comparison of Mental Toughness of University Students Based on Amateur and Professional-National Status*

| Scales and Dimensions           | Status                | N   | Mean  | Standard Deviation | t    | p      |
|---------------------------------|-----------------------|-----|-------|--------------------|------|--------|
| Confidence                      | Amateur               | 177 | 18,49 | 2,94               | -    | 0,002* |
|                                 | Professional/National | 72  | 19,69 | 2,24               | 3,12 |        |
| Commitment                      | Amateur               | 177 | 11,63 | 2,63               | -    | 0,197  |
|                                 | Professional/National | 72  | 12,11 | 2,79               | 1,29 |        |
| Control                         | Amateur               | 177 | 12,57 | 1,73               | 0,85 | 0,397  |
|                                 | Professional/National | 72  | 12,35 | 2,07               |      |        |
| Mental Toughness                | Amateur               | 177 | 42,68 | 5,65               | -    | 0,063  |
|                                 | Professional/National | 72  | 44,15 | 5,55               | 1,87 |        |
| Challenge-focused Encouragement | Amateur               | 177 | 23,21 | 4,72               | -    | 0,324  |
|                                 | Professional/National | 72  | 23,85 | 4,20               | 0,98 |        |
| Potential-focused Encouragement | Amateur               | 177 | 23,28 | 4,44               | 0,42 | 0,670  |
|                                 | Professional/National | 72  | 23,01 | 4,33               |      |        |
| Academic Encouragement          | Amateur               | 177 | 46,49 | 8,46               | -    | 0,751  |
|                                 | Professional/National | 72  | 46,86 | 7,96               | 0,32 |        |

Note. The Authors. \* $p < 0.05$ .

There was no significant difference in mental toughness of university students based on their professional/national status, except for the confidence dimension ( $p > 0.05$ ). No significant difference was found in terms of the sub-dimensions of academic encouragement and total score based on their amateur and professional athlete status ( $p > 0.05$ ).

**Table 6.**

*The Relationship between the Sub-Dimensions and Total Scale of the Mental Toughness Scale and the Dimensions and Total of the Academic Courage Scale*

|                  |   | <b>Challenge-focused<br/>Encouragement</b> | <b>Potential-focused<br/>Encouragement</b> | <b>Academic<br/>Encouragement</b> |
|------------------|---|--------------------------------------------|--------------------------------------------|-----------------------------------|
| Confidence       | r | -,070                                      | -,028                                      | -,053                             |
|                  | p | ,271                                       | ,663                                       | ,402                              |
| Control          | r | -,025                                      | ,015                                       | -,006                             |
|                  | p | ,695                                       | ,819                                       | ,925                              |
| Commitment       | p | -,051                                      | -,001                                      | -,029                             |
|                  | r | ,426                                       | ,987                                       | ,654                              |
| Mental toughness | r | -,063                                      | -,007                                      | -,039                             |
|                  | p | ,322                                       | ,910                                       | ,544                              |

*Note.* The Authors.

No significant relationship was found between the sub-dimensions and total scale of the mental toughness scale and the dimensions and total of the academic courage scale ( $p > 0.05$ ).

## DISCUSSION

The findings should be interpreted in light of the specific purpose of the study: to examine whether a construct developed in sport psychology can contribute to the discussion of academic dispositions among university students, without reducing academic life to athletic performance. The results indicate that this transposition is only partial. Mental toughness varied according to several sport-related and demographic parameters, whereas academic courage remained comparatively stable across the same parameters. This pattern suggests that sport experience may be more strongly associated with sport-specific psychological resources than with academic encouragement itself.

This study's mental toughness scale has a maximum score of 56 (Altıntaş & Bayar-Koruç, 2017). In this study, female students scored 39.85 (71.16% of the scale score), whereas male students scored 45.86 (81.89% of the scale score). Based on these scale results, it can be concluded that students studying sports at university have a high level of mental toughness.

A high score on the academic courage scale indicates strong academic courage (Clark & Malecki, 2019). The scale consists of ten questions and given that the "very right" choice in each question is worth six points, the highest possible score is sixty. In this study, female students' academic courage scores were 46.98 (78.3% of the maximum possible score on the scale), while male students' scores were 46.27 (77.12% of the maximum possible score on the scale). Given these results, it may be concluded that the students exhibit a high level of academic courage.

Research suggests that mental toughness levels remain consistent between genders (Bayrakdaroğlu, 2014; Çakmak, 2019; Gökmen, 2014; Peke, 2020; Türkoğlu, 2019; Maraşlı, 2018). Nicholls et al. (2008), Saavedra et al. (2018), and Masum (2014) discovered that male athletes had higher levels of mental toughness than female athletes. Süleymanoğulları and Tozoğlu's (2021) study revealed that male athletes had higher levels of mental toughness in the commitment sub-dimension compared to female athletes. Cesuroğlu and Sadık's (2025) study demonstrated statistically significant differences between genders in Confidence and Commitment variables. The relevant study indicated a substantial difference in mental toughness among university students based on gender ( $p < 0.001$ ). Male athlete students had higher mental toughness scores than female athlete students. Unlike mental toughness, this study found no statistically significant differences in academic encouragement sub-dimensions and total scale scores by gender ( $p > 0.05$ ).

Süleymanoğlu and Tozoğlu's (2021) investigation found no significant difference in mental toughness scores among age groups. According to Cesuroğlu and Sadık (2025), athletes with a longer training age had greater mental toughness scores compared to those with inexperience or a shorter training age. University students' commitment, control, and total mental toughness scores differed significantly by age, with the exception of the confidence component ( $p < 0.05$ ). The 26-30 age group had higher mental toughness scores than the other two age groups (18-20 and 21-25). İslam et al. (2021) found a significant difference in the self-confidence sub-dimension of the Sports Courage Scale-31 (SCÖ-31) after analyses for the variable of age. It is suggested that as a football player's self-confidence grows, so does his/her courage. Tayhan et al. (2020) discovered that courage, one of the Creative Thinking Tendencies Scale's sub-dimensions, remained constant across age groups. Güvendi et al. (2018) found that courage scores did not vary by age and discovered a substantial difference in courage levels in terms of years of sports experience in their study. The authors found no statistically significant difference in the overall scores of the Academic Encouragement Scale sub-dimensions, Challenge-focused Encouragement, Potential-focused Encouragement, and Academic Encouragement, based on age ( $p > 0,05$ ).

This study found substantial differences in competing students' mental toughness based on their age in sports, including sub-dimensions of confidence, control, and commitment, as well as the overall scale score ( $p < 0.05$  and  $p < 0.001$ ). Students having at least nine years of sports experience received the highest scores. Competitive athletes' mental toughness was observed to strengthen as they gain more expertise in sports. However, there were no significant

variations in academic encouragement scale sub-dimensions or total scores across sports age categories ( $p > 0.05$ ).

The study indicated a significant difference ( $p < 0.001$ ) in the commitment dimension of university students' mental toughness scores based on type of sports (team and individual sports), but no significant difference in the confidence and control dimensions and mental toughness ( $p > 0.05$ ). Similarly, no significant difference was discovered between the academic encouragement scale sub-dimensions and total score based on type of sports ( $p > 0.05$ ).

Many studies have shown that success is related to learning fear and anxiety, the effectiveness of courage-based practices, emotional learning skills and courage, mental resilience depending on courage levels, and courage in individual and team athletes (İslam et al., 2021). In their study, Süleymanoğlu and Tozoğlu (2021) concluded that the mental toughness levels of national athletes were higher than non-national athletes in terms of confidence. No significant relationship was found between national status and mental toughness level in many studies (Akılveren, 2017; Gölge, 2019; Orhan, 2018; Çakmak, 2019; Dede, 2019). In this study, mental toughness of university students based on their professional/national status did not differ significantly except for the confidence dimension ( $p > 0.05$ ). No significant difference was found in the academic encouragement scale sub-dimensions and total score based on their amateur and professional athlete status ( $p > 0.05$ ).

Altıntaş (2023) observed a positive correlation between courage and all sub-dimensions of prosocial behavior, which was mediated by self-compassion and resilience. In this study, no significant link was established between the sub-dimensions of the mental toughness scale and the overall scale, as well as the dimensions and total of the Academic Courage scale. This study implies that mental toughness and academic courage are not separate elements of the same psychological construct, and that contextual and conceptual distinctions should be made. Future research should look at the environmental influences and individual characteristics that influence these two constructs in greater detail. University students were shown to possess high levels of mental toughness and academic courage. While students' mental toughness differed according to gender, age, athletic age, and amateur/professional/national competitive status, their academic courage levels were comparable. There was no association found between students' mental toughness and academic courage. It is advised that this study be conducted with a bigger sample size, including both university students and those who do not currently receive sports training.

## **FINAL CONSIDERATIONS**

This study investigated mental toughness and academic courage among university students from a Faculty of Sport Sciences and examined whether sport-related parameters could help explain variations in these constructs. The results showed high levels of both mental toughness and academic courage in the sample. However, the two constructs behaved differently: mental toughness presented significant differences according to gender, age, years of sports experience and confidence related to professional/national status, while academic courage did not differ significantly according to the parameters analyzed.

The absence of a significant correlation between mental toughness and academic courage is one of the central findings of the study. It indicates that the psychological resources measured by a sport mental toughness inventory cannot be automatically transferred to the academic field as predictors of academic courage. Therefore, the contribution of the study lies precisely in showing the limits of this transposition: sport experience appears to be associated with confidence, control and commitment in sport-related psychological functioning, but these dimensions do not necessarily correspond to greater willingness to take academic risks, persist in academic tasks or engage with learning challenges.

From an educational perspective, these findings suggest that student support programs should avoid assuming that students with high sport-related mental toughness will necessarily display higher academic courage. Interventions in higher education should consider context-specific academic indicators and combine them, when relevant, with psychological constructs from sport sciences. Future studies should include students from different faculties and universities, compare athletes and non-athletes, and use broader educational indicators such as academic achievement, engagement, retention, self-regulated learning and perceived academic support. These steps would make it possible to evaluate more precisely the relationship between sport-derived psychological constructs and academic development.

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### *CRediT Author Statement*

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