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Sport Management - Injuries, Pain and Fear a Causal Relationship
Gestión Deportiva - Lesiones, Dolor y Miedo una Relación Causal

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ABSTRACT
High-competition athletes are more likely to sustain a variety of injuries than most sports practitioners, which causes them worry and agony when they return to sports activity. According to current studies, despite the rates of return to sport after injury, 19% of athletes with a shoulder dislocation injury and receiving surgical treatment were unable to return to sport owing to fear of a future injury (kinesiophobia). The study, "Sports Management - Injuries, pain and fear a causal relationship," aims to gather a variety of perspectives on issues related to the topic of pain and fear of injuries in high-competition sports from athletes and other agents involved in the sport. It focuses on the following lines of thinking: athlete injuries in high-competition sport; the external influence and balance of the athlete; injuries and the sporting environment and future challenges. A quantitative, descriptive methodology was applied. On the other hand, the goal was to find out from the respondents what they thought about more objective questions on the subject matter to gauge their perception of the fear of harm in sports. To put it succinctly, the findings indicate that a few variables are largely important in reducing sports-related injuries and the resulting imbalance in the athlete's body and mind.

Keywords: Sport; Injuries, Pain; Fear; Athlete.

RESUMEN
Los deportistas de alta competición tienen mayor riesgo de sufrir multitud de lesiones que la mayoría de los practicantes de deporte, provocándoles miedo y dolor al volver a la actividad deportiva. Los estudios actuales indican que a pesar de las tasas de retorno al deporte después de una lesión, un porcentaje que asciende al 19% de los deportistas con una lesión por luxación del hombro y sometidos a tratamiento quirúrgico no pudieron volver al deporte por miedo a una nueva lesión, la kinesiofobia. El estudio titulado "Gestión Deportiva – Lesiones, dolor y miedo una relación causal", tiene como objetivo obtener de los estudiantes de la carrera de Gestión Deportiva de la Universidad Autónoma de Lisboa y de otros agentes vinculados al deporte, un variado conjunto de consideraciones sobre aspectos relacionados con el tema del dolor y el miedo a las lesiones en el deporte de alta competición, con especial atención a las líneas de pensamiento: lesiones de los deportistas en el deporte de alta competición; la influencia externa y el equilibrio del deportista; lesiones y el entorno deportivo y retos futuros. Se utilizó una metodología cuantitativa de carácter descriptivo. Por otro lado, se buscó conocer de los encuestados cuáles eran sus opiniones respecto a preguntas más objetivas sobre el tema en estudio con vistas a la percepción del miedo a lesionarse en el deporte. En definitiva, los resultados apuntan a una combinación de factores como elementos clave preponderantes para minimizar las lesiones en el deporte, con el consiguiente equilibrio físico y mental del deportista.
Palabras clave: Deporte; Lesiones, Dolor; Miedo; Atleta.

I. INTRODUCTION

Sport in the modern day is unquestionably a cultural phenomenon with infinite varieties. These days, there's a real chance that sports could accrue a moral baggage that will tarnish its reputation as a teaching tool. In this sense, we recognise that the sports system as it exists today cannot and ought not to tolerate the denigration and contempt of principles that uphold the significance, identity, and cultural and developmental implications of participating in sports. Based on contemporary sports and social ideals, where desire and the underlying motivations for competition take precedence over other considerations and social concerns. The need for athletes to succeed in sports, the impact of environments on sports, the mental equilibrium of high-competition athletes, and potential rewards were the basis of our introduction to the topic of

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"Mental balance - ethical behaviours in contemporary sport" in this context. This theme is relevant because different behaviours related to high-competition athletes' mental health have been observed in the media. These behaviours include seeking advice that, when combined with other areas of expertise, may effectively help these young athletes' mental well-being. If not, there's a chance that these highly competitive individuals—elite athletes, national treasures-will develop into unstable individuals with a range of problems and struggle to fit in with society. Several implications drawn from the study will also be discussed at the end.

II. LITERATURE REVIEW

KINESIOPHOBIA: In sports, kinesiophobia is the term used to describe an overwhelming dread or anxiety related to physical movement. This can include a fear of getting hurt, a fear of failing, or a fear of the unknown when it comes to engaging in particular physical activities. Participation in sports and athletic performance may be impacted by this phobia. According to a study conducted by Rossi et al. (2021), 74% of patient athletes did not resume their sport following surgery because they were afraid of being hurt again and were apprehensive about starting a new rehabilitation programme.

One of the most important psychological elements that fall under the purview of our study is neuroticism. Specifically, we define neuroticism as an athlete's propensity to feel unfavourable emotions under competitive situations, such as worry, despair, or irritation. High neuroticism in athletes may make them more prone to worry about their performance, fear failure, or overreact in stressful situations. The emotions mentioned above are favourably connected with each athlete's unique neuroticism vs level of stress, per BW. Brewer et al. (2007). However, they also have a negative relationship with optimism and sporting identity.

FEAR: It has recently been determined that the fear of sports-related injuries plays a critical role in the development of chronic pain in competitive sports and anxiety associated to pain. Sport-related injury fear was tested through the use of structural equation modelling. The function of fear of damage in modern theory was evaluated by structural equation modelling, according to Michel, A. Thibodeau et al. (2013). 64% of the variance in pain-related anxiety was attributed to sensitivity to pain and worry as well as fear of damage from sports. Both pain-related anxiety and impairment were indirectly predicted by fear of harm and pain-related anxiety. In conclusion, fear of injury in modern sports may be a significant factor in pain-related anxiety and impairment, deserving of theoretical and clinical attention.

RISK: Peer influence poses a serious risk of injury, especially when it is observed that peers are participating in risky but seemingly attractive activities. The inherent nature of sports carries several dangers that are linked to injury (Kroncke et al., 2008).

RESUMING SPORTS AFTER INJURY: A study by Theodore P. Van Lersel et al. (2023) examined the post-injury return to competition of high-level competition athletes. Of the 3,545 athletes who received surgical treatment with bone reconstruction procedures, 27% did not resume their sport activities (18%). The primary excuses offered for not getting back into sports were pain (10%), anxiety (8%), and recurring instability of the operated limb (2%). We also present an analysis by Inge EPM van Harena, b. et al. (2022) about the subject of surgical intervention and returning to sports following an accident. According to the authors, 81% of athletes resume any sport following rehabilitation, 65% can compete at the same level as before the accident, and 55% are able to resume competitive sports. Additionally, it was feasible to ascertain that individuals who have a high degree of physical performance, have sustained a particular kind of injury (such as a concussion), or play competitive sports (like football) are more likely to return to sport after an injury (Forsdyke et al., 2016; Van Ierssel et al., 2022).

RETURN TO PARTICIPATION: According to Ardern CL. Eth. Al. (2016), during the phase when recovering athletes resume playing sports, most of them take part in training sessions tailored to their needs; yet they do not yet play the sport at the required level of demand.

RETURN TO ATHLETIC PERFORMANCE: The authors caution that a gradual recovery is necessary to obtain a medium- and long-term performance level that is at least as high as it was prior to the injury (Ardern CL. et al., 2016).

III. METHODOLOGY

The study's foundation is "applied research," which attempts to produce information for real-world application targeted at resolving issues (Gil, 2006). As far as everything can be counted, "quantitative research" was employed as a methodology, which entails converting judgements and data into numerical representations to categorise and evaluate them (Collis; Hussey, 2005). To achieve the goals, "descriptive research," which tries to characterise the traits of a particular population, phenomena, or the development of correlations between variables, was

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employed. There was a survey or methodical observation done (Gil, 2006). Along with its characterisation, the sample's whole process will be shown. The process of selecting the data collection instrument and the method for analysing the information gathered using techniques to determine the study's results and conclusions were both covered in the next phase.

PARTICIPANTS

Finding the people and subjects we wish to study-the target population-is one of the steps in the research process. A subset of the sample was identified based on this clarification and the impossibility of analysing the entire population for a variety of reasons. This subset included students enrolled in the second and third years of the Autonomous University of Lisbon's degree programme in sports management (2024/25) as well as other agents involved in sport in various capacities. It made it possible for us to gather information or observations to make judgements about the population from which the data was gathered (Vilelas, 2020). 53 responders could be included in a viable sample.

INSTRUMENT

The questionnaire survey was the tool employed. The five-point Likert scale was used to facilitate the development of the instrument, which was based on Batista, Moreira, Rodrigues, and Silva (2021). It enabled us to learn about various viewpoints on a certain subject. The assessment levels on the Likert scale utilised in the study were as follows: completely disagree = 1; disagree = 2; neither agree nor disagree = 3; agree = 4; and I entirely agree = 5. The questionnaire is divided into two sections. The first section asks sociodemographic questions about the respondents that are being studied, such as their age, gender, household, location within or outside of Lisbon, participation in sports, and nationality. The second section Four groups are separated into the following categories based on the many items that are suggested to measure the study variables: F1: Sports injuries sustained by athletes in high-competition events (5 items); F2: Athlete balance and external influences (2 items); F3: Sports injuries and the surrounding environment (8 items); F4: Upcoming challenges (3 items). Following a rigorous and thorough analysis, independent and dependent variables with the relevant and essential dimensions to answer the research's objectives were created. Additionally, objective data collection was structured with the study's issue in mind. Several variables were chosen in this continuity and within the parameters of the study with the intention of offering a direct response, while others enable them to be related to one another, so examining and characterising the various dimensions that are being examined. The variables were chosen and added to the survey questionnaire.

PROCEDURES

Students enrolled in the second and third years of the Autonomous University of Lisbon's Sports Management degree programme for the academic year 2024/25, as well as other agents associated with the sports industry, were the target audience for the survey. surveys were created following the preparation of a pre-test for a limited number of responders, yielding a final sample of 53 valid surveys. The goal of the collection, which took place during the school year, was to include as many students as possible from the previously specified Sports Management school years as well as those with ties to the sports world. Every responder was made aware of the purpose of the study beforehand, and they all actively and voluntarily participated, guaranteeing the privacy and confidentiality of their answers.

DATA PROCESSING

The Microsoft Excel application was used to enter and tabulate the gathered data. For every research variable, the arithmetic mean of the recorded observations was also computed. The data were then transferred to SPSS and Jamovi version 1.6.23, a statistical analysis programme, where descriptive analyses, including frequency, measures of central tendency, and dispersion, were performed. The extremes and quartiles of the distribution were also shown using the graphical representation of the correlation matrix. The Cronbach's Alpha parameter, which is often used to quantify the inter-correlation between items intended to measure a certain variable, was used to analyse reliability and internal consistency. Another non-parametric technique used to assess if the variables had a normal distribution was the Shapiro-Wilk test. The degree of linkage and relationship between the variables was also assessed using the Spearman test.

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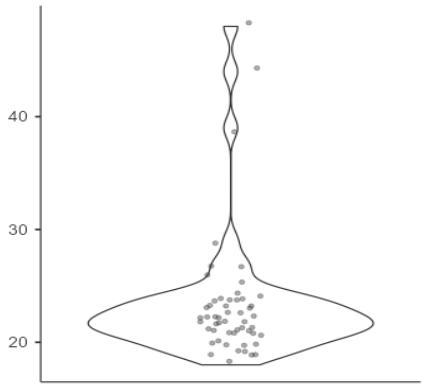
IV. ANALYSIS AND DISCUSSION OF RESULTS

Respondents' sociodemographic profile: The sociodemographic analysis shows some heterogeneity among individuals polled for the study, specifically: Age indicator: the data indicates that the maximum recorded age is 48 years old, and the minimum is 18 years old. It is observed that the age that was repeated the most frequently for both genders was 21 years old regarding measurements of central tendency. The reported average (Me=23.3) years was the centre of the mode (Mo=21.0). Graph 1: The Median was valued at (Md=22.0).

Graph 1 - Age



Source: Jamovi (2025)

The average age of the respondents in the category covered by the statistics above is 23.3, indicating a significantly high percentage of young individuals who participate in sports. For all respondents included in the analysis, the "Shapiro-Wilk" normality test yielded a value of w=0.958 and p<0.094 for males, which is greater than p<0.05. A value of w=0.813 and p<0.077, which is likewise more than p<0.05, was found for the female gender, indicating that the quantitative variable in both genders has a normal distribution, as shown in Table 1.

Table 1 - Variable normality test *gender* "*Shapiro-Wilk"*

		Shapiro-Wilk		
Id	**Gender**	**N**	**W**	**P**
	M	47	0.958	0.092
	F	6	0.813	0.077

Source: Jamovi (2025)

It was able to confirm the variation in p-values regarding the "Shapiro-Wilk" normality test, based on stratified analysis (age/household/gender). For both males and females, a p-value of less than 0.001 was found, suggesting that the variable's distribution is not normal. P<0.006 indicates that the household's male members have a normal distribution. Table 2 displays this information.

Table 2 - Normality test (age/household/gender) "*Shapiro-Wilk"*

								Shapiro-Wilk	
	Gender	**N**	**Mean**	**Mode**	**Standard Deviation**	**Min**	**Máx**	**W**	**P**
Age	M	47	23.09	22.00	5.012	18	48	0.636	<0.001
	F	6	25.33	21.00	9.180	21	44	0.566	<0.001
Household	M	47	3.15	3.00	1.103	1	6	0.904	<.0006
	F	6	2.67	2.00	0.816	2	4	0.822	<0.001

Source: Jamovi (2025)

Household: Based on the respondents' household and the sample examined, it can be inferred that the majority of the respondents-roughly 32.1% of the sample studied-live in homes with a maximum of three people. We are still left with 28.3%, or a maximum of two people. Just one respondent resides in a household of five people, while two people, or 3.8% of the sample, live in clusters of six people. As shown in Graphic 2, we have an Average (Me=30.6), Mode (Mo=1.00), and Median (34.00) in the family with the highest representation (3 individuals).

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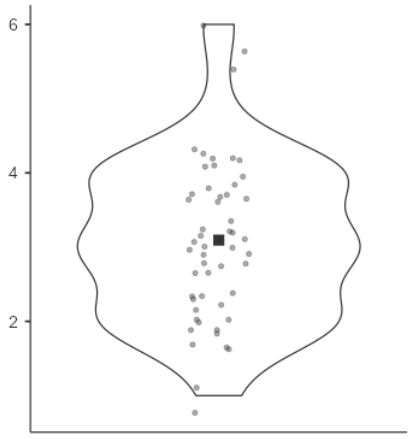
Graphic 2 - Household



1	2	3.8 %	3.8 %
2	15	28.3 %	32.1 %
3	17	32.1 %	64.2 %
4	16	30.2 %	94.3 %
5	1	1.9 %	96.2 %
6	2	3.8 %	100.0 %

Source: Jamovi (2025)

Lisbon residency: Of the 53 responders, 44 seem to live in Lisbon, while only 9 don't appear to live outside of the Lisbon municipality. confirmation of a higher number of responders living in the city. Nationality: 51 respondents, or 96.2% of the sample, were of Portuguese nationality, according to the poll results. Angolan nationality makes up about 3.8% of the sample, or 2 respondents. A frequency analysis was performed, specifically examining the absolute and relative frequencies of the gathered information. Central tendency and dispersion metrics, such as mean, median, and mode, standard deviation, variance, maximum, and minimum, were continuously calculated. In exploratory data analysis, statistical tools are frequently employed to uncover trends that might be concealed in grouped data. This analysis supports the evaluation of the data collection's quality.

F1 - ATHLETE INJURIES IN HIGH COMPETITION SPORT

This study's F1 - "Athlete injuries in high-competition sports" was designed to gauge the traits linked to: Regarding Question Q1, which asked whether "high-competition athletes are at greater risk of suffering injuries than most sports practitioners?", roughly 37.7% of respondents said they completely agreed, 45.3% said they agreed, 11.3% said they neither agreed nor disagreed, and only 2 people, or 5.7% of the total, expressed dissent. As a result, it seems to us that most respondents have a consensus view about the posed subject (table 3 - Q1).

Table 3 - Q1

Q1 - Frequencies			
Q1	**Counts**	**% Total**	**% Cumulative**
I Disagree	3	5.7%	5.7%
I do not agree nor disagree	6	11.3%	17.0%
Agree	24	45.3%	62.3%
I totally agree	20	37.7%	100.0%

Source: Jamovi (2025)

"Can injury impact sporting success?" is Question Q2. Every respondent agreed with the question posed. 34.0% of respondents said they agreed, while 66.0% said they totally agreed. Given the results, the question posed-namely, whether an injury can affect a person's ability to succeed in sports-is undoubtedly answered (see table 4-Q2).

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Table 4 - Q2

Q2 - Frequencies			
Q2	**Counts**	**% Total**	**% Cumulative**
Agree	18	34.0%	34.0%
I totally agree	35	66.0%	100.0%

Source: Jamovi (2025)

When asked if the psychological effects of injuries affect an athlete's performance during a high-competition event, 54.7% of respondents said they absolutely agreed, 43.4% said they agreed, and only one person said they disagreed. Based on the results, it is generally accepted that 98.1% of respondents believe that the psychological effects of injuries have an impact on a player's ability to perform.

In response to question Q4, which asked whether injuries could be linked to moral dilemmas like doping and the use of illegal substances to speed up recovery from injuries, 5.7% of respondents said they totally agreed, 50.9% said they agreed, about 35.8% said they neither agreed nor disagreed, and only 7.5% said they disagreed. More than 56.6% concur that moral dilemmas such doping and the use of illegal medications to hasten healing from injuries can have an impact on injuries. All the respondents agreed with the fifth question, which asked whether early monitoring of athletes' health and wellbeing can aid in the early identification of injury risk factors. 32.1% of respondents said they absolutely agreed, while 67.9% said they agreed. Once more, a broad viewpoint that is in line with the inquiry made is achieved. As the research progresses, we hope to learn more about things like the relationship between question Q2, "Can an injury impact sporting success?" and other related topics. and Q4: "Can ethical problems, like doping and using illegal substances to speed up healing from injuries, be linked to injuries?" We employed the "Pearson" non-parametric correlation matrix to ascertain the correlation between these two variables, and the following outcomes were obtained: For Q2, the correlation matrix in Table 5 and Graph 3 displays an average correlation of considerably distant from 0, or 0.047, with the Pearson R value corresponding to a value of 0.737<0.005, obtaining a very significant correlation.

Table 5 - Matrix of corrections from Q1 to Q5

		Q1	Q2	Q3	Q4	Q5
Q1	R de Pearson	—				
	p-value	—				
Q2	R de Pearson	0.082	—			
	p-value	0.559	—			
Q3	R de Pearson	−0.116	0.143	—		
	p-value	0.410	0.305	—		
Q4	R de Pearson	−0.012	0.047	0.097	—	
	p-value	0.932	0.737	0.488	—	
Q5	R de Pearson	0.167	0.237	−0.178	0.096	—
	p-value	0.233	0.088	0.201	0.494	—

Source: Jamovi (2025)

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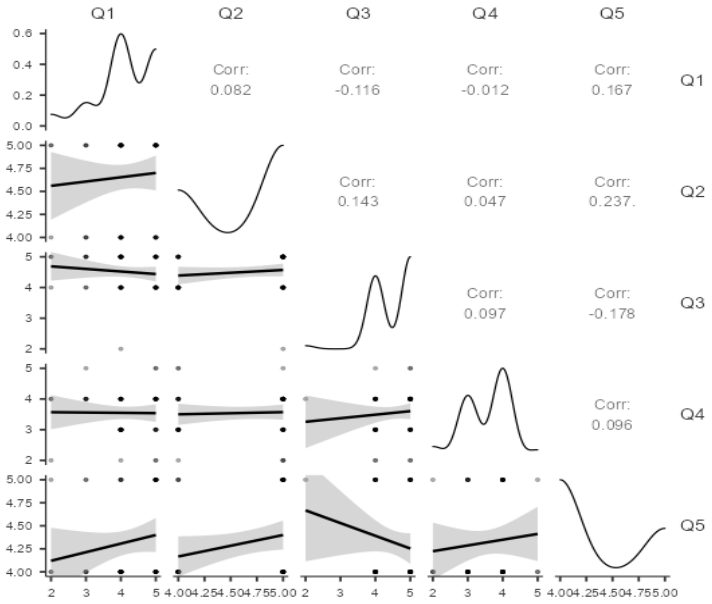
Graphic 3: Matrix of corrections from Q1 to Q6



Source: Jamovi (2025)

F2 - EXTERNAL INFLUENCE AND THE ATHLETE'S BALANCE

The following are related to the variable F2, "External influence and the athlete's balance": In response to Question Q6, which asked whether medical teams are essential in avoiding, diagnosing, and treating injuries as well as working to rehabilitate athletes and reduce downtime, 62.3% of respondents said they totally agreed, 35.8% said they agreed, and only one person said they didn't know. Once more, it shows that a sizable portion of respondents have positive thoughts about the question that was asked.

Question 7: "Can educational programmes and awareness initiatives help inform athletes, coaches, parents, and healthcare professionals about injury prevention, warning signs, and safety measures in sport?" received positive responses from 31.1% of respondents, agreement from 58.5%, neutral responses from 5.7%, and negative responses from 3.8% of respondents. All things considered; we can say that most people concur that educational initiatives can aid in athletes' injury prevention.

Question Q6: "Do medical teams play a crucial role in the prevention, diagnosis, and treatment of injuries, working to rehabilitate athletes and minimise downtime?" is one that we hope to learn more about as the study progresses. And query Q7: "Can educational programmes and awareness initiatives help inform athletes, coaches, parents, and medical professionals about sports safety precautions, injury prevention, and warning signs?" We employed the "Pearson" non-parametric correlation matrix to ascertain the correlation between these two variables, and the following outcomes were obtained: In table 6's correlation matrix, the value of p=0.067<0.005 for Q6 results in a highly significant correlation. Pearson's R value equates to a value of 0.253, which is far from 0, and is thought to be a good correlation between Q6 and Q7.

Table 6 - Matrix of corrections from Q6 to Q7

		Q6	Q7
Q6	R de Pearson	—	
	p-value	—	
Q7	R de Pearson	0.253	—
	p-value	0.067	—

Source: Jamovi (2025)

F3 - INJURIES AND THE SPORTING ENVIRONMENT

Regarding Question Q8: "Can weather conditions contribute to the risk of injuries in high-competition sports?" Variable F3: "Injuries and the sporting environment."13.2% of respondents said they totally agreed, 56.6% said they agreed, 18.9% said they neither agreed nor disagreed, 9.4% said they disagreed, and just 1.9% said they totally disagreed.

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To put it succinctly, 69.8% of respondents think favourably of the subject posed.

Question 9: "Is there a connection between high-competition sports injuries and the quality of sports facilities?" Regarding the question posed, almost 86.8% of the total responses expressed agreement. There were just 5.7% of dissenting views.

In response to Question Q10, "Does the quality of playing surfaces, such as lawns and athletics tracks, affect the risk of injuries for athletes during competition?", 52.8% of respondents (agree) and 47.2% of respondents (completely agree) expressed a positive opinion of the possibility of injuries to athletes during sporting events.

Question Q11: "Can overuse injuries among high-competition athletes be caused by increased training load and insufficient recovery time?" Of the respondents, 47.2% said they absolutely agreed, 49.1% said they agreed, and only two said they neither agreed nor disagreed. Based on the results, most respondents concur that a lack of recovery and an increase in training load can lead to a rise in injuries.

"Can spectator behaviour contribute to the risk of injuries in high-competition sports?" is the question Q12. Regarding the question, all Likert scale responses were obtained, meaning that the responses were transversal. Specifically, 3.8% of respondents said they completely agreed, 13.2% said they agreed, 43.4% said they neither agreed nor disagreed, 30.2% said they disagreed, and 9.4% said they totally disagreed.

Question Q13: "Can athletes' behaviour be affected by the emotional intensity of competitions and become more prone to injuries as a result of rash decisions or inattention?" The findings clearly show some scepticism, or perhaps a lack of understanding, regarding issues related to athletes' emotional capacity in comparison to their behaviour and risk of injury. The results showed that 58.4% of respondents agreed, 37.7% disagreed, and only two respondents gave a negative response.

Question Q14: "Can verbal abuse or coercion from the crowd affect athletes' safety and create dangerous circumstances during athletic events?" Complete agreement was expressed by 5.7% of respondents, agreement was expressed by 47.2%, disagreement was expressed by 22.6%, disagreement was expressed by 18.9%, and extreme disagreement was expressed by 5.7% of respondents. About 52.9% of those surveyed think favourably of the question posed.

Question Q15: "Can athletes' ability to recover adequately between competitions be affected and their risk of injury increased by frequent travel, time zone changes, and dietary and sleep adjustments?" Approximately 90.5% of respondents think favourably of the question posed. Afterwards, we looked for connections between, say, question Q8 ("Can weather conditions contribute to the risk of injuries in high-competition sports") and other data. and query Q11: "Can overuse injuries among highly competitive athletes be caused by increased training load and insufficient recovery timeWe employed the "Pearson" non-parametric correlation matrix to ascertain the correlation between these two variables, and the following outcomes were obtained: Table 6's correlation matrix shows that there is a reasonable correlation between Q8 and Q11, with a value of 0.002, which is far from 0, according to Pearson's R value for Q8 (p=0.876<0.005), indicating a very significant association.

Table 6 - Matrix of corrections from Q8 to Q15

		Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
Q8	R de Pearson	—							
	p-value	—							
Q9	R de Pearson	0.522	—						
	p-value	< .001	—						
Q10	R de Pearson	0.195	0.381	—					
	p-value	0.162	0.005	—					
Q11	R de Pearson	0.022	−0.043	0.098	—				
	p-value	0.876	0.762	0.486	—				
Q12	R de Pearson	0.375	0.117	0.164	0.103	—			
	p-value	0.006	0.405	0.241	0.462	—			
Q13	R de Pearson	0.368	0.135	0.149	0.193	0.302	—		
	p-value	0.007	0.337	0.286	0.167	0.028	—		
Q14	R de Pearson	0.264	0.063	0.257	0.171	0.519	0.478	—	
	p-value	0.056	0.653	0.063	0.221	< .001	< .001	—	
Q15	R de Pearson	0.551	0.410	0.286	0.023	0.329	0.237	0.271	—
	p-value	< .001	0.002	0.038	0.868	0.016	0.088	0.049	—

Source: Jamovi (2025)

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F4 - FUTURE CHALLENGES

Regarding Question Q16, which asks, "Is sports science constantly looking for new ways to prevent, treat, and rehabilitate injuries, with the aim of improving the health and performance of athletes?" 35.8% of respondents agreed, 62.3% disagreed, and only one respondent did not have an opinion, responding with "neither agree nor disagree." This variable, F4, is titled "Future challenges."

Question Q17: "Do sports organisations have an obligation to put safety policies and injury prevention procedures in place in order to create a safe environment for athletes?" 52.8% of respondents said they totally agreed, 43.4% said they agreed, and just two said they had no opinion and did not know whether to agree or disagree.

Question Q18: "Should physical trainers and coaches be aware of the risks associated with injuries and use training techniques to lower those risks and encourage safe recovery?" Like the preceding question, the one posed elicited a favourable response rate of about 96.2%. In contrast, we intend to determine, for instance, what relationship there is between question Q16, which states, "Sport science is constantly looking for new ways to prevent, treat, and rehabilitate injuries, with the aim of improving athletes' health and performance," and the previously provided responses. and Q18, "Should coaches and physical trainers implement training strategies to reduce the risk of injuries and promote safe recovery?" As an additional question. We employed the "Pearson" non-parametric correlation matrix to ascertain the correlation between these two variables, and the following outcomes were obtained: Table 7's correlation matrix shows that there is a substantial connection between Q16 and Q18, with a value of 0.075 for Q16 and a value of p=0.595<0.005 for Q18, indicating a very significant association.

Table 7 - Matrix of corrections from Q16 to Q18

		Q16	Q17	Q18
Q16	R de Pearson	—		
	p-value	—		
Q17	R de Pearson	0.205	—	
	p-value	0.141	—	
Q18	R de Pearson	0.075	0.336	—
	p-value	0.595	0.014	—

Source: Jamovi (2025)

Following an examination of the frequency distributions of the answers to the statements (items suggested to measure the study variables) presented. Regarding the central tendency measure, it was discovered that the mean and median for each variable in this study had an average value of 4. In terms of mode, 4 is the most common value (I concur). The range of the lowest numbers found is 1 (completely disagree) to 5 (absolutely agree). Additionally, the data demonstrates that the sample has some extreme values between the maximum and minimum values, which supports a certain amount of data dispersion. Analysis of reliability and internal consistency (Cronbach's Alpha): Pairing correlations between items yield the Cronbach's Alpha Coefficient, which is typically used to quantify internal consistency. As stated by Santos, Almeida, and Costa (2010). According to Almeida et al. (2010), Cronbach's Alpha can be defined as the mean of the correlations between the items that make up the instrument. The range of the internal consistency index is 0 to 1. Reliability is generally considered adequate when the degree of consistency is $\alpha>0.7$; the crucial value suggested by Nunnally (1978) was used as a guide. A high level of acceptability is indicated by values observed in the range of 0.8 to 0.9. Values in the range of 0.50 to 0.21 are deemed acceptable; values below this range indicate poor consistency and are not. In conclusion, Table 8 illustrates that the Likert items suggested to measure the study's variables have an adequate degree of reliability, as indicated by their degree of internal consistency of 0.571.

Table 8 - Cronbach's alpha coefficient (F1, F2, F3, F4)

Scale reliability statistics				
	Mean	**Standard desviation**	**α de Cronbach**	**ω de McDonald**
Scale	3.46	0.385	0.571	0.630

Source: Jamovi (2025)

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V. CONCLUSIONS

This study sought a diverse range of perspectives on issues related to pain and fear of injury in sports from participants in the Autonomous University of Lisbon's Sports Management course as well as other agents associated with the sport. high competition, with a special emphasis on the following lines of thinking: athlete injuries in high competition sports; the athlete's balance and external influence; injuries and the sporting environment; and problems for the future. To put it another way, for each of the four groups of questions that were raised - F1, F2, F3, and F4, a combination of customised responses was received, from which the following conclusions could be made: of the fifty-three respondents who answered the set of questions posed in variable F1, "Athlete's injuries in high-competition sport," forty-seven of them gave a favourable response, or 88.7% of the total. According to the research, most respondents believe that when comparing sports injuries to sports results, the topic of athlete injuries in high-competition sports is relevant. With reference to the findings from F2- "External influence and the athlete's balance," it can be said that the majority of students-that is, 100.0% of the responses-responded in a negative way. This causes us to draw certain conclusions, such the fact that every responder believes that medical teams don't have a major influence on preventing injuries. In relation to injuries and the sporting environment, which is defined as F3, it was found that most respondents concur that a combination of the factors already mentioned in questions Q8 through Q15 can impact an athlete's physical state and, as a result, increase the likelihood of injuries during sports. Regarding the conclusions drawn from F4 - "Future Challenges," it can be seen that, when the questions were taken into consideration, 41.55% of respondents said they disagreed, and 58.5% said they agreed. This indicates that all respondents have many doubts and little faith in the future of injury-free sport, especially when it comes to the role that sports organisations will play in ensuring a safe environment for athletes and the adoption of new strategies by coaches and trainers to lower the risk of injuries.

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