

The Relationship Between Impulsivity, Cognitive Consequences, and the Severity of Sports Injuries Among Iraqi Swimmers

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1. Round 1

1.1. Reviewer 1

Reviewer:

In the sampling description, the authors write that “the statistical population of the study consisted of all swimmers in Iraq” while simultaneously acknowledging that “no exact figure was obtained” regarding the population size. This raises concerns about sampling representativeness and external validity. The manuscript should provide a clearer explanation of the accessible population, recruitment strategy, geographic distribution of participants, and the characteristics of clubs represented in the sample.

The use of GPower is mentioned with “medium effect size of 0.15 and number of variables equal to 4”. However, the statistical procedure used in the power analysis is not specified. The authors should report the exact GPower model, test family, statistical test selected, effect size rationale, and assumptions used to estimate the required sample size.

In the Measures section, the authors describe the Cognitive Consequences of Sports Injuries Questionnaire as consisting of seven knowledge-related domains. However, no psychometric information from the original validation study is reported. The manuscript should include evidence regarding construct validity, factor structure, criterion validity, and original reliability coefficients to support the appropriateness of the instrument.

The manuscript states that “all seven components of the cognitive consequences of sports injuries had significant negative relationships with swimmers’ impulsivity” . However, no assessment of multicollinearity is reported despite the seven predictors being conceptually related. Variance Inflation Factors (VIF), tolerance values, and intercorrelation matrices should be provided.

The injury variable is repeatedly referred to as “sports injuries” and analyzed using linear regression , yet the manuscript does not clearly explain how injury severity was quantified. The authors should explicitly describe the scoring procedure, measurement scale, range, and psychometric properties of the injury outcome variable.

Authors uploaded the revised manuscript.

1.2. Reviewer 2

Reviewer:

The manuscript states that “their reliability was also assessed using Cronbach’s alpha, which was 0.80 for the Cognitive Consequences of Sports Injuries Questionnaire and 0.70 for the Impulsivity Questionnaire” . Reporting only total alpha coefficients is insufficient. Reliability estimates should be provided separately for each subscale, especially because subsequent analyses are conducted at the dimension level.

The data collection procedure contains a potentially serious methodological issue. The authors note that questionnaires were distributed “to coaches physically in 75% of cases” despite the participants being swimmers. Clarification is required regarding whether coaches completed the questionnaires, distributed them to athletes, or served another role. This ambiguity directly affects the validity of the collected data.

In the Findings section, the authors present demographic information but omit important sport-specific characteristics such as competitive level, swimming discipline, weekly training volume, and current injury status . Because these variables are known predictors of injury risk, their absence limits interpretation of the results and may introduce confounding effects.

Table 1 reports a correlation coefficient of $R = -0.638$ alongside $R^2 = 0.619$. Mathematically, squaring -0.638 yields approximately 0.407 rather than 0.619. This discrepancy suggests either a reporting error or a misunderstanding of the regression output. The authors must carefully recheck all regression statistics.

In the text following Table 1, the authors claim that “60% of the total variance in swimmers’ impulsivity was related to the cognitive consequences of sports injuries” . Given the apparent inconsistency in Table 1, this interpretation may be inaccurate. The variance explanation percentages should be recalculated and verified before publication.

Table 2 contains several statistical irregularities. For example, the regression sum of squares, mean square values, and F-statistic do not appear internally consistent . The authors should provide the original SPSS outputs or thoroughly review the calculations to ensure accuracy and transparency.

In Table 3, the reported coefficients for the cognitive consequence dimensions show positive beta values despite negative unstandardized coefficients (e.g., sports injury knowledge: $B = -0.150$, $Beta = 0.268$) . This inconsistency requires correction because the direction of the relationships becomes unclear.

Authors uploaded the revised manuscript.

2. Revised

Editor’s decision after revisions: Accepted.

Editor in Chief’s decision: Accepted.