

The likelihood of developing depression following sport-related concussion

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Project Overview

Risk factors associated with depression in athletes include biological sex, physical pain, and history of sport-related concussion (SRC). Due to the prevalence of pain and SRC altering based on the type of sport athletes compete in, sport-type was also of interest. To our knowledge, there has been no research on how these factors affect the likelihood of depression and therefore this study aimed to address this gap.

Method

Participants: One-hundred-and-forty-four participants participants (Age, $M = 22.79$, $SD = 5.61$) was obtained consisting of 68 males (Age, $M = 24.41$, $SD = 5.50$) and 76 females (Age, $M = 21.34$, $SD = 5.33$).

Measures: General Information Questionnaire designed by the researchers gathered demographic variables. This included data on biological sex, age, sport-type (non-sport, non-contact sport, contact sport), SRC history and pain (using NRS-11) (1). The CESD (2) followed and measured depressive symptoms.

Note—Meaningful depressive symptoms were operationalised as scoring ≥ 16 on the CESD (3).

Results

Logistic regression found biological sex, physical pain, SRC history, and sport-type to all be significant predictors of meaningful depressive symptoms.

Females	2.89	↑	than males
SRC	56.98	↑	than non-SRC
Contact Sport	71.43	↑	than non-sport
Non-Contact Sprot	4.37	↑	than non-sport
Physical Pain	1.38	↑	for every score of physical pain (0-10)

Table 1. Logistic regression predicting the likelihood of reporting meaningful depressive symptoms

	Odds Ratios	p
Sex	2.89	.030*
Physical Pain	1.38	.002**
SRC history	56.98	.001**
Non-Contact Sport	4.37	.041*
Contact Sport	71.43	.001**
Constant	0.29	.023*

Conclusion & Future Directions

The present study provides evidence of various risk factors for developing depression. To our knowledge, we are the first to calculate odds ratios for developing depression using these risk factors and the present findings add value to the literature. It is vital to continue researching the role of biological sex on mental health disorders, such as depression, as females are so often found to be at greater risk, while it appears that males conceal this personal information. Continuing to examine this area better allows us to support and protect vulnerable sportspeople. Additionally, we have found that SRC and physical pain provide a significant risk to mental health. This finding is corroborated by those that take part in contact sports, where SRC and physical pain are prevalent, demonstrating a significantly greater risk than those that engage in no sport. Interestingly, those that take part in no sport at all are less likely to be depressed than those that take part in non-contact sports. This is likely due to the role of physical pain such as repetitive strain injuries or those in the ‘non-sport’ group having previously sustained an SRC and having stopped competing because of its effects. With SRC much less likely, and the difference between non-sport, and non-contact sport minimal, sportspeople should not be deterred from engaging in non-contact sports. Instead, sportspeople

References

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