

Reporting of Concussion Symptoms in High School Aged Athletes

Aimee Hite B.S.¹, Patrick Karabon¹, Neal Alpiner M.D.²

¹Oakland University William Beaumont School of Medicine, Rochester, Michigan ²Department of Physical Medicine and Rehabilitation, Beaumont Health System, Royal Oak, Michigan

Introduction

Each year, one to two million concussions occur in the youth populations and constitute 8.9% of all high school athletic injuries. However, current literature lacks studies that focus on concussion symptoms. This study sought to ascertain the prevalence of reporting concussion symptoms and continuing to play while experiencing symptoms in high school aged athletes.



https://search.creativecommons.org/photos/c157f6f0-9b60-44e6-bf0b-b6db0bc89e95

Aims and Objectives

- Ascertain the prevalence of concussion symptoms
- Quantify the reporting of concussion symptoms and continuing to play while experiencing symptoms

Methods

Due to restrictions on surveying minors, this study surveyed Oakland University undergraduate students using a 6-question online survey. The survey used 5 major measures of concussion symptomology (dizziness, headaches, confusion, nausea, and blacking out) in order to examine whether high school athletes are reporting and continuing to play with concussion symptoms.²

Results

Of the 433 students surveyed, 299 reported experiencing one or multiple concussion symptoms. Of those who reported symptoms, 37.29% were not communicated to a supervising adult, and 76.09% continued to play while experiencing symptoms. This contrast was largest in the confusion symptom category: 53.12% of students did not tell a supervising adult, and 37.60% continued playing while experiencing confusion. Additionally, when stratifying the data by sport, football players were more likely to experience concussion symptoms than participants of any other sport.

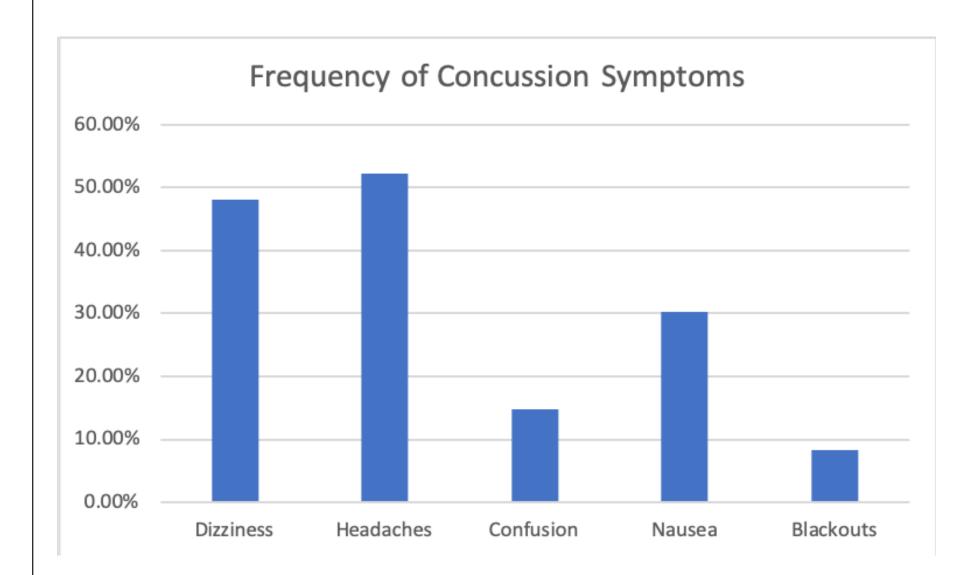


Figure 1. Concussion symptom frequency as reported by high school aged athletes.

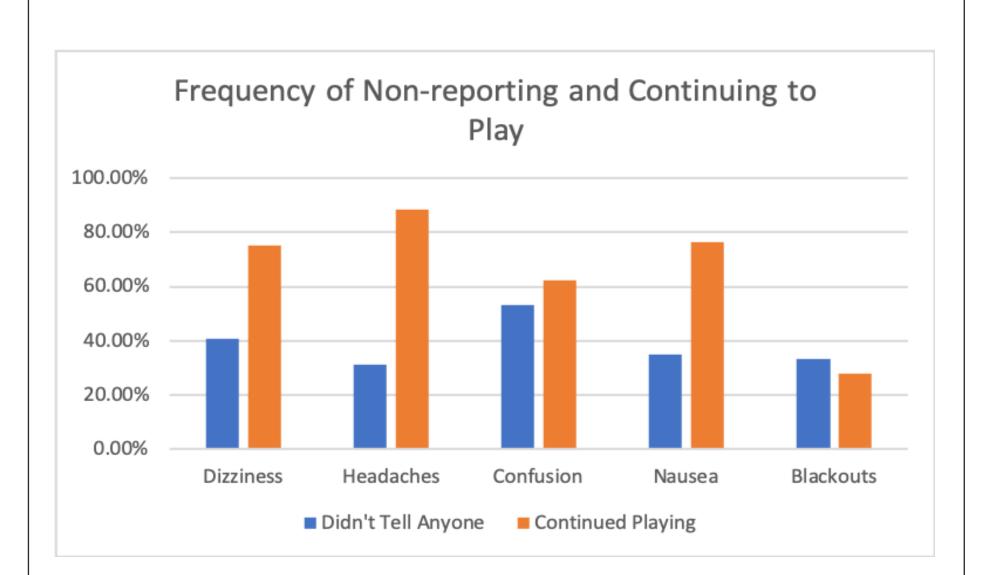


Figure 2. Frequency of non-reporting symptoms and continuing to play while experiencing symptoms in high school athletes.

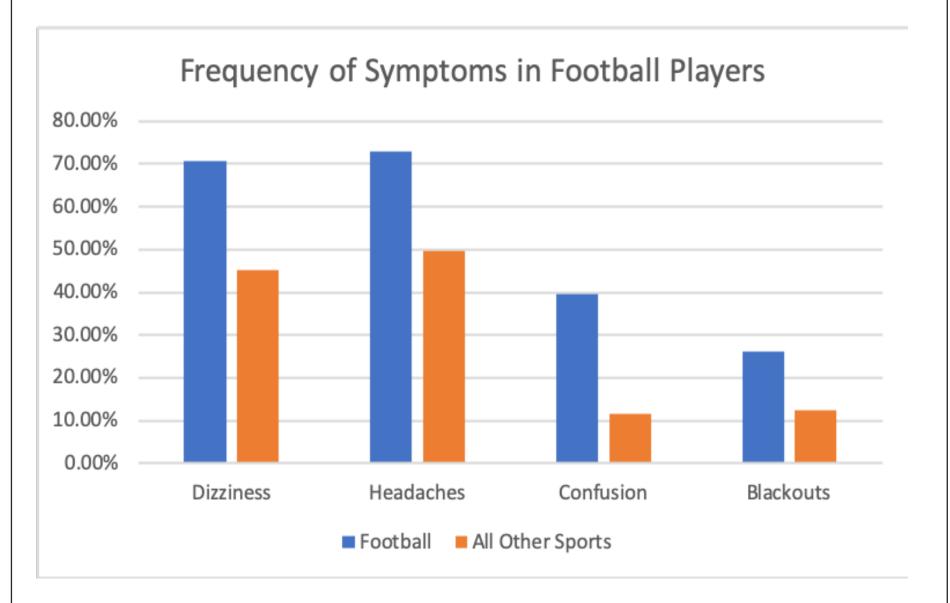


Figure 3. Concussion symptom frequency in football players as compared to all other sports.

Conclusions

This study reveals that many concussion symptoms are being under-reported and underrecognized by high school student athletes. In those athletes who were aware of symptoms, they continued to play in spite of symptoms that would require them to refrain from contact, which increases the risk of a complicated concussion. This study demonstrates the importance of educating students on concussion symptoms and publicizes the statistics on the current status of concussion symptom reporting in high school athletes.

References

- 1. Gessel LM, Fields SK, Collins CL, Dick RW, Comstock RD. Concussions among United States high school and collegiate athletes. J Athl Train. 2007;42(4):495-503. http://www.ncbi.nlm.nih.gov/pubmed/18174937. Accessed December 30, 2018.
- 2. SCAT3 Sport Concussion Assessment Tool 3rd Edition.; 2013. http://bjsm.bmj.com/. Accessed December 30, 2018.

Acknowledgements

The authors would like to thank the embark faculty at OUWB. We would specifically like to thank Dr. Sawarynski for her dedicated advising throughout the completion of this research project.