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ABSTRACT

INTRODUCTION

When an athlete is diagnosed with a concussion under the current concussion guidelines, they must stay out a minimum of a week as they go through a slow progression of exertional and neurocognitive tests once they are asymptomatic. This is a great improvement to concussion treatment in the past when athletes were often dangerously returned. However, because of the “blanket” 1-week minimum return policy, we believe the current RTP guidelines are potentially leading athletes to hide their symptoms so they do not have to stay out. We surveyed 53 athletes from soccer, basketball, lacrosse, and football teams from 3 universities in Southeast Ohio (ages 18-22, 34=male, 19=female). The survey contained questions about their demographics, concussion symptom knowledge, concussion history, potential reporting of symptoms, and opinion on their university’s return to play policy. The results showed that 40% of athletes would be willing to hide their symptoms of a mild concussion and 21% believe that their university’s return to play policy affects this decision. While the results do not completely confirm our hypothesis, we still believe that the numbers we received in our study are enough to warrant a consideration of the current “blanket statement” return to play policy in favor of a very similar but more individualized version.

METHODS

Subjects

The athletes who we surveyed were from three NCAA Division II Universities in Southeast Ohio. All three of the universities that we used had return to play guidelines that were consistent with the International Consensus Guidelines. These athletes from these universities had to be involved in a sport with a high-incidence of concussions. Although head trauma is known to be in a high concussion incidence sport (football, soccer, basketball, lacrosse), it was not a requirement that they had experienced a previous concussion. The survey was sent to a total of 220 athletes, of which 53 responded for a response rate of 24%. Of those who responded, 34 were male and 19 were female. The majority of these athletes were between the ages of 18-22.

Survey

Our research method for this study was survey based. In order to test our hypothesis, a 20 question survey was prepared with the following five sections: 1) Background demographic information questions (5 questions); 2) Identifying common concussion symptoms (2 questions); 3) concussion history (2 questions); 4) reporting of concussions (10 questions); and 5) return to play guidelines (5 questions). The survey took approximately 10-15 minutes to complete though a brief survey of the official times shows that most athletes took the survey in under 10 minutes. The section on background demographic information included questions about the athletes age, gender, varsity sport, and the year of college they were in. The section on “identifying common symptoms” was included in the survey to ensure whether the athletes had some knowledge of what a concussion would feel like as we were about to ask them whether they might be dishonest about concussion symptoms. The “concussion history” section showed as which athletes had actually experienced a concussion before. In the “reporting of concussions” section, we asked the athletes if they had been dishonest about concussion in the past and if they thought they would potentially hide concussion symptoms in the future. When questioning athletes about potential future concussions, we were careful to ask two different questions specifying the difference between hiding what they thought were “mild” symptoms and what they thought were “severe” symptoms. We also asked them to explain why they would or would not hide. In the last section, we asked questions pertaining to their university return to play guidelines, such as their knowledge of the policy, whether they were in favor of it or not, and if they would like to see anything changed in the policy. A sample question from this section is, “In your opinion, does your university’s concussion policy affect the way you report your concussion symptoms? Explain.” A full copy of the survey is located in appendix A(still to come).

PROCEDURE

An email was sent to the athletes briefly explaining the research project and providing a link to an online, electronic questionnaire. The athletes had one month to follow the link and complete the survey. A more detailed explanation of the project with the informed consent information was attached in a document to the email. Two weeks after the original email, another email was sent to the athletes reminding them to take the survey. The data was collected to the secure, online database. The demographic information and 7 of the “yes or no” and Multiple-choice closed-ended questions were quantitatively analyzed using the summary data provided by the online database. The remaining 8 open-ended questions were analyzed qualitatively for similar categories and themes.

RESULTS

The demographic information and 7 of the “yes or no” and Multiple-choice closed-ended questions were quantitatively analyzed using the summary data provided by the online database. The remaining 8 open-ended questions were analyzed qualitatively for similar categories and themes.

STATISTICAL ANALYSIS

The demographic information and 7 of the “yes or no” and Multiple-choice closed-ended questions were quantitatively analyzed using the summary data provided by the online database. The remaining 8 open-ended questions were analyzed qualitatively for similar categories and themes.

CONCLUSION

The results showed that 40% of the athletes would want to hide their symptoms if they thought the concussion was only “mild”. Based on our knowledge of athletes and other studies, we believe that this number would be very similar or higher if the study were to be done more extensively (McCrea, Clin Jour of Spec Med, 2004). Ultimately, the athletes do not think the symptoms are serious enough to warrant missing playing time. This then leads to the question, “Is there such a thing as a ‘mild’ concussion?” The literature seems to support the idea that many concussions are mild and that they should be treated based on their severity (Hettinger, Med & Sci in Sp & Ex, 2011). If concussions can be mild and the recovery be based upon the athletes symptoms, then why is there a blanket statement that there must be a 5-7 day minimum time out? The current literature states that 80-90% of concussions resolve within 7-10 days with many specifying the symptoms often resolve within a week (Guskiewicz, J of Ath Train, 2004) but many of those 80-90% of concussions actually heal within a few days. (Helmholtz, J Neurotrauma, 2009) We fully support the safety concerns behind the consensus guideline recommendations. However, 40% of athletes in our study would be willing to hide their symptoms of a “mild” concussion since they believe it was “severe”. We believe that 40-40% of athletes who are hiding their symptoms would decrease if this was the case. The majority of athletes (79%) said that their RTP policy did not affect their reporting symptoms because they knew the safety risks they were taking if they hid their symptoms. However, 21% of the athletes thought the policy did not significantly affect the way they reported their symptoms. These answers strongly support our claim that our current guidelines are potentially causing athletes to hide their symptoms because they know for sure that they will be out a guaranteed week if they say anything.

LIMITATIONS

We had a small sample size and relied on the honesty of the athletes. We also lacked football, rugby, and hockey athletes who are the most susceptible to concussions. In conclusion, athletes do not think the current concussion guidelines are sufficient and should be changed to better accommodate the reality of mild concussions. We believe that changing the current consensus guidelines could significantly decrease the number of mild concussions that are being hidden from the young athletes who are most susceptible to concussions.