The awareness level of concussion injuries among amateur athletes and coaches

BEN KIRK¹*, ROSANNA COUSINS¹, DOMINIC O’ CONNOR² & SHAUN M. PHILLIPS³.

¹Liverpool Hope University, ²Abertay University, ³University of Edinburgh

Corresponding author: kirkb@hope.ac.uk
@bennikirk

Concussion occurs following a forceful impact to the brain inducing sudden trauma, and may lead to chronic physical, cognitive and/or emotional impairments (Kerr et al, 2013, SAGE, 7, 138-153). As physical activity patterns increase across recreational teams, high schools, colleges, and at professional level, so do the amount of sports-related concussions (SRC) (Fraas et al, 2014, Irish Journal of Medical Science, 184, 425-430). In amateur university sports where participation is high (Kasamatsu et al, 2016, Athletic Training and Sports Health Care, 8, 112-120), there is a lack of data on the awareness level of SRC among athletes and coaches. Therefore, this investigation sought to evaluate concussion knowledge among university level athletes and coaches. Following institutional ethical approval, forty healthy male rugby union (n = 20) and Gaelic football (n = 20) players (age: 22 ± 2 years and 21 ± 1 years, respectively; playing experience: 7.5 ± 1 and 5.0 ± 1 years, respectively) (mean ± s) and eight male coaches from Gaelic football, rugby union, soccer, hockey, netball, and basketball (age: 23 ± 2 years; coaching experience: 6.0 ± 1
years) (mean ± s) completed two validated surveys (Cusimano et al, 2009, *Canadian journal of neurological sciences*, 36, 315-320; McKinlay, Bishop and McLellan, *Brain injury*, 25, 761-766) examining knowledge of concussive signs, symptoms, management and return to play guidelines. Respondents had significant misconceptions surrounding SRC; 35% of athletes believed that a player must lose consciousness to suffer from a concussion and 20% believed that it was safe to play with a concussion. About 40% of rugby union athletes believed players could return to play two days after suffering a concussion. Despite having greater concussion knowledge in comparison to the athletes, 25% of coaches did not know how to identify a concussion and 25% were unaware of the return to play guidelines. Rugby union and Gaelic football athletes exhibited a similar sub-optimal level of concussion knowledge. In summary, a marked number of athletes and coaches hold misconceptions surrounding concussive signs and symptoms. Additionally, a number were unaware of the management procedure and return to play guidelines post-concussion. There is a need for educational concussion strategies to be implemented in university sport, to maximise the health and safety of those participating. However, the effectiveness of such an educational programme requires further investigation prior to implementation (Fraas & Burchiel, 2016, *European journal of sports sciences*, 1-7).