

1 **The awareness level of concussion injuries among amateur athletes and**
2 **coaches**

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12 Concussion occurs following a forceful impact to the brain inducing sudden trauma,
13 and may lead to chronic physical, cognitive and/or emotional impairments (Kerr et al,
14 2013, *SAGE*, 7, 138-153). As physical activity patterns increase across recreational
15 teams, high schools, colleges, and at professional level, so do the amount of sports -
16 related concussions (SRC) (Fraas et al, 2014, *Irish Journal of Medical Science*, 184,
17 425-430). In amateur university sports where participation is high (Kasamatsu et al,
18 2016, *Athletic Training and Sports Health Care*, 8, 112-120), there is a lack of data
19 on the awareness level of SRC among athletes and coaches. Therefore, this
20 investigation sought to evaluate concussion knowledge among university level
21 athletes and coaches. Following institutional ethical approval, forty healthy male
22 rugby union (n = 20) and Gaelic football (n = 20) players (age: 22 ± 2 years and 21 ±
23 1 years, respectively; playing experience: 7.5 ± 1 and 5.0 ± 1 years, respectively)
24 (mean ± s) and eight male coaches from Gaelic football, rugby union, soccer,
25 hockey, netball, and basketball (age: 23 ± 2 years; coaching experience: 6.0 ± 1

26 years) (mean \pm s) completed two validated surveys (Cusimano et al, 2009, *Canadian*
27 *journal of neurological sciences*, 36, 315-320; McKinlay, Bishop and McLellan, *Brain*
28 *injury*, 25, 761-766) examining knowledge of concussive signs, symptoms,
29 management and return to play guidelines. Respondents had significant
30 misconceptions surrounding SRC; 35% of athletes believed that a player must lose
31 consciousness to suffer from a concussion and 20% believed that it was safe to play
32 with a concussion. About 40% of rugby union athletes believed players could return
33 to play two days after suffering a concussion. Despite having greater concussion
34 knowledge in comparison to the athletes, 25% of coaches did not know how to
35 identify a concussion and 25% were unaware of the return to play guidelines. Rugby
36 union and Gaelic football athletes exhibited a similar sub-optimal level of concussion
37 knowledge. In summary, a marked number of athletes and coaches hold
38 misconceptions surrounding concussive signs and symptoms. Additionally, a number
39 were unaware of the management procedure and return to play guidelines post-
40 concussion. There is a need for educational concussion strategies to be
41 implemented in university sport, to maximise the health and safety of those
42 participating. However, the effectiveness of such an educational programme requires
43 further investigation prior to implementation (Fraas & Burchiel, 2016, *European*
44 *journal of sports sciences*, 1-7).