Physical Therapy in Sport 33 (2018) 27–32

Contents lists available at ScienceDirect

Physical Therapy in Sport

journal homepage: www.elsevier.com/ptsp

Original Research

Current injury monitoring and player education practices in Irish amateur rugby union

Caithriona Yeomans [a, *], Thomas M. Comyns [a], Roisin Cahalan [b, c], Giles D. Warrington [a, c], Andrew J. Harrison [a], Kevin Hayes [d], Mark Lyons [a], Mark J. Campbell [a, e], Ian C. Kenny [a, c]

[a] Department of Physical Education and Sport Sciences, University of Limerick, Ireland
[b] School of Allied Health, University of Limerick, Ireland
[c] Health Research Institute, University of Limerick, Ireland
[d] Department of Mathematics and Statistics, University of Limerick, Ireland
[e] Lero, The Irish Software Research Centre, University of Limerick, Ireland

ARTICLE INFO

Article history:
Received 22 February 2018
Received in revised form
26 June 2018
Accepted 26 June 2018

Keywords:
Injury
Sport
Prevention
Education

ABSTRACT

Objectives: To ascertain current injury surveillance and player education practices in Irish amateur rugby union.
Design: Cross-sectional survey.
Setting: Amateur rugby clubs in Ireland.
Participants: Medical professionals and rugby coaches of the top 58 amateur rugby clubs in Ireland.
Main outcome measures: The survey investigated the current injury and training load monitoring practices in operation in Irish amateur rugby. It also explored whether player education sessions regarding injury prevention and concussion recognition and management were conducted in these clubs.
Results: Forty-four clubs completed the survey, giving an overall response rate of 76%. Ninety-one percent of the responding clubs monitored injuries. Sixty-four percent of these clubs operated return to play protocols for all injuries, while 36% operated return to play protocols for concussion only. Injury prevention education was conducted by 71% of these clubs and 82% educated players on concussion recognition and management.
Conclusions: Implementing effective injury monitoring strategies in both amateur and professional sport settings may aid in minimizing injury risk. In Ireland, 91% of the responding clubs monitored injuries and 71% educated players on injury prevention. By implementing one centralized injury surveillance system for Irish amateur rugby, injury trends can be effectively monitored and used to guide prevention strategies.

1. Introduction

Rugby union, hereafter rugby, is a physically demanding team sport, with approximately 8.5 million registered amateur and professional players in over 121 countries worldwide (World Rugby, 2017). Numerous studies (Bleakley, Tully, & O'Connor, 2011; Freitag, Kirkwood, & Pollock, 2015; Gardner, Iverson, & Stanwell, 2014; Williams, Trewartha, & Stokes, 2013; Yeomans et al., 2018) have established the etiology and extent of rugby-related injuries, with pooled incidence rates of 46.8/1000 player hours (Yeomans et al., 2018) to 81/1000 player hours (Williams, Trewartha, Kemp, & Stokes, 2013) reported in amateur and professional cohorts respectively. The exposure to collisions and contact events, results in a high incidence of injury in comparison to other team sports, such as Australian Football (39/1000 player hours) (Ekegren et al., 2015) ice hockey (52.1/1000 player hours) (Tuominen, Stuart, & Parkkari, 2015) and soccer (31.8/1000 player hours) (van Beijsterveldt, Stubbe, & Backx, 2015). Injury prevention programs like the FIFA 11 + in soccer (Barengo et al., 2014) and targeted neuromuscular control exercise programs in Australian football (Finch et al., 2016) have been effective in minimizing the risk of sports injuries. Successful injury prevention programs are firstly reliant on comprehensive injury surveillance systems (Holder & World Health Organisation Staff, 2002), however this can

* Corresponding author. Department of Physical Education and Sport Sciences, University of Limerick, Castletroy, Co. Limerick, Ireland.
E-mail address: caithriona.yeomans@ul.ie (C. Yeomans).

https://doi.org/10.1016/j.ptsp.2018.06.008
1466-853X/

be more difficult in amateur cohorts than professional cohorts, owing to a lack of resources and infrequent contact between medical professionals and amateur teams (Emery, Meeuwisse, & Hartmann, 2005; van Beijsterveldt, Stubbe, Schmikli, van de Port, & Backx, 2015). The World Rugby consensus guidelines on injury recording and reporting in rugby provide guidance to ensure consistency in injury surveillance strategies in this sport (Fuller et al., 2007). These guidelines have added to the growing body of research, aimed at improving the standards of injury surveillance (Ekegren, Donaldson, & Finch, 2014; Junge et al., 2008; Orchard et al., 2005) however, much of this research has been conducted in professional or elite sport settings and may not translate effectively to an amateur cohort, where resources may be limited (Donaldson & Finch, 2012; Finch, 2012). Therefore, when implementing injury surveillance systems in amateur settings, the level of staffing and resources available must first be established, in order to address any limitations that may affect the efficacy of the system (Donaldson, Leggett, & Finch, 2012; Finch, 2012). The subsequent success, or otherwise, of the implemented injury surveillance and prevention strategy is reliant on adherence, from both the players and the coaching or medical staff in an elite setting (McCall, Dupont, & Ekstrand, 2016). Education and communication have been highlighted as facilitators to increase coach compliance and player adherence with injury prevention strategies in elite football (McCall et al., 2016). Therefore, conducting player education sessions may assist in increasing player compliance and adherence, in order to reduce injury risk (Orr et al., 2013).

Currently the Irish international men's team is ranked in the top five, and the Irish international women's team is ranked in the top ten, of the World Rugby Rankings (World Rugby, 2018). Following the publication of the World Rugby consensus guidelines, there has been an increase in the literature on rugby, particularly in the elite setting (Fuller et al., 2007). To date, the practices regarding injury monitoring, medical staff resources and player education in Irish amateur rugby have not yet been examined and while the focus of the current study is on Irish amateur rugby, the data gathered adds to this growing body of literature on rugby. Establishing these practices, may aid in the development and implementation of future injury surveillance and/or prevention strategies.

The purpose of this survey therefore was to ascertain the national injury monitoring and recording methods, player education practices and level of staffing currently in operation in Irish amateur rugby.

2. Methods

2.1. Procedures

The current study utilized a cross-sectional survey design. Data regarding Irish rugby injury monitoring and player education practices were collected using an online questionnaire distributed via SurveyMonkey (SurveyMonkey, Palo Alto, CA, USA) cloud based software.

In Ireland, there are 224 amateur rugby clubs currently registered, across four provinces; namely Leinster (71 clubs), Munster (67 clubs), UIster (60 clubs) and Connacht (26 clubs). Within mens' amateur rugby in Ireland, there is a national league of 50 senior clubs called the Ulster Bank League (UBL). Similarly, in womens' amateur rugby in Ireland there are eight senior clubs participating in the All Ireland League (AIL). These 58 clubs are considered the highest level of amateur player in Ireland. An introductory email describing the concept and objectives of the survey was sent to rugby club secretaries, team coaches and registered medical professionals working with the senior first team in each of the 58 clubs. The purpose of the email was to explain the survey, the time commitment and confidentiality of all collected information. The email also provided a web link to access the survey; therefore, informed consent was indicated by subsequent completion of the survey. Participants were informed that they may exit the survey at any time without any implication. Participants were given 100 days to complete the survey from the date the email was distributed. A reminder email containing the survey link was sent 30 days, 60 days and 90 days after the initial email. After 100 days, all complete responses were downloaded from the SurveyMonkey site and collated for statistical analysis.

2.2. Participants

The survey was designed to be completed by the primary medical professional working with the senior first team in each of the 58 clubs in Ireland. The protocols and procedures in operation in these 58 clubs represent the current practices in place for an estimated 5800 players (based on an estimated 100 players per club). In clubs where no medical professional was registered, the head rugby coach was invited to complete the survey on behalf of the club or forward to the most suitable participant to complete. Ethical approval for this study was granted by the institution's Research Ethics Committee in compliance with the Declaration of Helsinki.

2.3. Survey

The initial questionnaire was developed as an online survey and piloted by four medical professionals with experience in team sport, injury reporting and rugby, prior to dissemination. The expert panel group were asked to provide feedback on the structure of the survey, questions content and whether or not the survey matched the purpose of the study. The panel provided specific recommendations with regard to the inclusion of questions around club demographics and the Standard Approach to Field Emergencies (SAFE) Rugby training. Modifications were then made to a number of questions. The final amended survey consisted of 27 fixed response questions, with five main sections:

1) Club demographics: The questions in this section ascertained the provincial branch and size of the club.
2) Monitoring and recording methods: The questions in this section sought to gather data on whether injury incidence or training load were monitored in the club. It included questions on how monitoring and recording were conducted and who in the club was responsible for this. It also sought to ascertain whether pre-season baseline concussion screening or past medical history reviews were conducted.
3) Staff: This section contained questions on the level of staffing available at matches, training and between training sessions. It also contained questions about the level of training of club staff, specifically, first aid training, automated external defibrillator (AED) certification and SAFE Rugby training.
4) Injuries: This section sought to gather data about the assessment and management of injuries. It contained questions on return to play (RTP) and return to training (RTT) protocols for all injuries including concussion.
5) Education: This section sought to ascertain whether any player education practices were in operation in the club, specifically with respect to concussion recognition and recovery and injury prevention strategies. It also contained questions regarding the frequency of these education sessions and who was responsible for conducting these sessions.