

are required to describe injury occurrence and inform injury prevention measures.

Objective To analyse injuries sustained by professional rugby union players in Scotland.

Design Prospective observational.

Setting Time-loss match injuries sustained in men's and women's international rugby, men's professional club rugby and men's and women's international sevens during the 2017/18 and 2018/19 seasons were recorded by Scottish Rugby medical staff. Match exposure was recorded by GPS device and/or video analysis.

Patients (or Participants) Across all cohorts, 208 players (men: 163; women: 45) participated during the 2017/18 and 2018/19 seasons (men's international n = 60; women's international n = 37; men's professional club n = 134; men's international sevens n = 29; women's international sevens n = 25). Several players represented multiple cohorts.

Interventions (or assessment of Risk Factors) Injuries within and between cohorts were compared.

Main Outcome Measures Injury incidence, severity, type and location.

Results Injury incidences were 292.8 (95% CI: 227.8–358.0)/1000 player match hours for men's international sevens, 183.3 (139.5–227.1)/1000 hours for women's international rugby, 167.5 (81.1–254.1)/1000 hours for women's international sevens, 160.0 (124.1–195.9)/1000 hours for men's international rugby, and 154.5 (140.2–168.8)/1000 hours for men's professional club. Median severity ranged from 6.0 - 19.5 days. Concussion (men's international: 22.5/1000 hours; women's international: 26.7/1000 hours; men's professional club: 28.9/1000 hours; men's international sevens: 37.3/1000 hours) was the most common injury for all cohorts except women's international sevens, where knee sprain/ligament injury was most frequent (41.9/1000 hours).

Conclusions Men's international sevens had the greatest injury incidence. Concussion was the most frequent injury in all cohorts except women's international sevens, where it was the second most common. Interventions to reduce concussion incidence would benefit all professional cohorts in Scotland.

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UTILITY OF THE HEALTH ACTION PROCESS APPROACH (HAPA) MODEL TO PREDICT INTENTION AND ADOPTION OF THE ACTIVATE INJURY PREVENTION EXERCISE PROGRAMME BY SCHOOL RUGBY COACHES

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Background Using *Activate*, a rugby-specific injury prevention exercise programme, has been shown to reduce injury risk in school rugby; however, implementing such programmes is challenging and adherence is often suboptimal. The Health Action Process Approach (HAPA) model is a promising theory for identifying modifiable determinants of programme uptake.

Objective To evaluate the utility of the HAPA model when predicting coaches' intentions to use *Activate*, and to explore the relationship between intention and programme adoption.

Design Prospective cohort study.

Setting English schools rugby (under-12 to under-18).

Participants Rugby coaches and support staff (n=38).

Interventions All coaches attended a pre-season *Activate* workshop. Coaches completed a questionnaire pre- and post-workshop, assessing HAPA predictors: risk perception, outcome expectancies, task self-efficacy, intention, action and coping planning, maintenance self-efficacy and recovery self-efficacy.

Main outcome measures Standardized regression coefficients (β) were used to measure the association between HAPA variables. Goodness-of-fit was assessed using the Comparative Fit Index (CFI), Tucker Lewis Index (TLI) and root mean square error of approximation (RMSEA). Programme adoption was self-reported at post-season.

Results Coaches' outcome expectancies ($\beta=0.33$, $p<0.05$) and task self-efficacy ($\beta=0.40$, $p<0.01$) were significantly associated with intention to use *Activate* ($r^2=0.28$). The model demonstrated good fit to predict intention (CFI=0.95, TLI=1.00, RMSEA=0.00). Task self-efficacy ($\beta=0.49$, $p<0.01$) and intention ($\beta=0.27$, $P<0.05$) were significantly associated with action and coping planning ($r^2=0.43$), though the relationship between intention and adoption was not significant ($\beta=0.09$, $p=0.63$).

Conclusions As hypothesised by the HAPA model, outcome expectancies and task self-efficacy were significant predictors of intention, and behaviour change strategies should focus on improving these. Predicted pathways between task self-efficacy, intention, and planning were also supported, though the model was underpowered to assess relationships between post-intentional variables and programme adoption. The model's utility beyond intention needs further exploration with larger sample sizes to identify additional intervention targets.

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SAFE AND SOUND FOR PERFORMANCE'S SAKE? AN EXPLORATION ON HEALTH AND SAFETY AWARENESS IN ELITE RUGBY

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Background In elite rugby union, players often expose themselves to risk-taking behaviours resulting in a high risk acceptance level. The practical and theoretical occupational safety and health (OSH) have the potential to reflect health outcomes (e.g., injuries and accidents) in sports settings.

Objective This study explores key indicators of injury prevention and welfare protection in rugby union from an OSH perspective.

Design This study utilises semi-structured interview, the duration of which ranged from 22 to 50 minutes digitally recorded with consents.

Setting Individual interviews were conducted with current rugby supporting staff involving in national, provincial and university level.

Patients (or Participants) The participants (n=15) were current rugby supporting staff including coaching staff, medical staff and other management personnel.

Interventions (or Assessment of Risk Factors) The interview transcripts were inductively analysed by using Nvivo software, the key risk factors were then identified using abductive analysis by adopting an existing safety climate framework.