

Injuries North vs South

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An interesting debate in rugby union is always around the comparison of northern to southern hemisphere rugby and the intensity of different competitions played in these hemispheres. The comparison of injury incidence between these competitions are also interesting.

In 2008 a study was done on the incidence of injuries in the Super 14 and Vodacom Cup played under experimental law variations, and these results were compared to injuries in the English Premiership and Rugby World Cup 2007.

The Super 14 competition comprises the leading professional club rugby players from Australia, New Zealand and South Africa and represents a similar standard of play to the Premiership in England: the Vodacom Cup involves the second tier of professional players in South Africa. Although there are significant differences in players' anthropometric measurements between the two competitions and compared to the English Premiership and RWC, the differences in absolute terms are small compared, for example, to the differences between these players and elite 18 year-old South African rugby players (stature: 179.2 cm, $p < 0.001$; body mass: 84.9 kg, $p < 0.001$).

Previous studies of Southern Hemisphere professional rugby teams used different definitions of injury from this study, which followed the recommendations of the rugby consensus statement. This made direct comparisons of the present study with these earlier studies difficult or impossible. However, other studies reported an incidence of 45 (95% CI: 27 – 76) missed match injuries/1000 player-match hours for one New Zealand Super 12 team, and a value of 31 (95% CI: 21 – 47) for three South African Super 12 teams. These values were not significantly different from the results reported here for missed-match injuries in both the Super 14 and Vodacom Cup. The incidence of time-loss injuries reported here for the Super 14 competition was similar to the incidence of time-loss injuries reported previously for English Premiership teams, although the

incidence in the Vodacom Cup was significantly lower. The results for both the Super 14 and the Vodacom Cup competitions were similar to the results reported for RWC 2007.

Injuries reported in the Vodacom Cup were significantly more severe than those reported in the Super 14 competition; this was mainly due to the higher incidences of minimal and mild injuries reported by Super 14 teams compared to Vodacom Cup teams. Comparisons of injury severity with previous Super 12 studies were not possible, as mean and median severity values were not published for either study. The severity values reported in the present study do however compare closely to the mean values of 18 and 15 days reported for the English Premiership and RWC 2007 respectively and the median value of 7 days reported for the RWC 2007.

There were no significant differences in the nature of injuries sustained in the Super 14 and Vodacom Cup competitions with the highest proportions of injuries in both competitions being lower limb muscle/tendon and joint (non-bone)/ligament injuries. It was not possible to compare the present results with previous studies of Super 12 competitions, as diagnoses for match and training injuries were grouped together in both the earlier studies. There were, however, no significant differences in the nature of injuries in either competition compared to equivalent results reported for the English Premiership and the RWC. The five most common injuries in the present study included the three most common injuries reported for English Premiership rugby (thigh haematoma, 8.8%; hamstring muscle strain, 6.2%; concussion, 4.8%) and RWC 2007³ (ankle ligament, 9.9%; knee ligament, 9.9%; hamstring muscle strain: 9.9%). The tackle was the most common cause of injury in both competitions, which is consistent with previous reports in English professional rugby. The major differences in injury causation in the Super 14 were significantly fewer ruck/maul and more tackled injuries compared to the English Premiership and significantly fewer collision and more tackling injuries compared to RWC.

For the Vodacom Cup, there were significantly more tackling injuries compared to the RWC. Overall, the incidence, nature and causes of match injuries in the two Southern Hemisphere competitions were similar to those reported previously for teams competing in the English Premiership and Rugby World Cup.

The Super 14 and Vodacom Cup competitions covered by the present study were played under the Experimental Law Variations introduced by the IRB. Benchmark data for the incidence and nature of injuries prior to the introduction of the ELVs(experimental law variations) were not available for either of these competitions. However, analyses of the results from the present study indicated that the risks and causes of injury in both competitions were similar to those experienced in the English Premiership and RWC 2007, which were played under the existing IRB Laws of the Game. The 2008 Super 14 competition implemented only one ELV that could be construed as directly affecting the level of physical contact (pre-gripping and lifting players in the lineout) and hence the risk of injury, although other ELVs may indirectly impact on the incidence of injury because time in play may increase. The study therefore indicated that the ELVs falling into the 'administrative', 'procedural' and 'technical' categories implemented in this competition did not impact adversely on the

incidence, nature or causes of injury. The 2008 Vodacom Cup, on the other hand, implemented all of the proposed IRB ELVs but the incidence of injury recorded in this competition was significantly lower than that recorded in the Super 14, the English Premiership and the Rugby World Cup. Whilst this may simply reflect a lower standard of play, most of the difference can be accounted for by the significantly lower incidence of injuries recorded in the minimal injury severity category, as there were no other major differences 🏉

