ANALYSIS OF POWER PLAY IN 2018 VARSITY CUP RUGBY COMPETITION

Riaan SCHOEMAN1 and Robert SCHALL2

¹ Department of Exercise and Sport Sciences, Faculty of Health Sciences,
University of the Free State, Bloemfontein, Rep. of South Africa
² Department of Mathematical Statistics and Actuarial Science, Faculty of Natural and Agricultural Sciences, University of the Free State, Bloemfontein, Rep. of South Africa

ABSTRACT

Varsity Cup (VC) rugby aims to promote young talent in the university environment. Power Play (PP) was implemented in VC rugby. This study analysed and evaluated the influence of the PP law in the 2018 VC on team strategy and implementation thereof during matches. Data were collected from 33 VC games played during 2018. Video footage of matches was analysed. The number of tries, penalties, conversions and points scored, players selected to leave the field, time in the game that PP was selected, set phase restart options and areas of restart of each PP were recorded. A questionnaire with open ended questions for all coaches of the participating universities reported their experiences with the PP. Most PPs were called during the third quarter (32.8%) of the game. The centres, players 12 (28.4%) and 13 (27.6%) were sent off most frequently. The teams who called PP scored 14 times (21.9%). The most popular starting position was a right-side scrum (38.8%). Coaches agreed that PP had the opposite outcome than was expected. The increased number of errors by attacking teams and willingness of opponents to slow down play, contributed to unsuccessful implementation of PP in Varsity Cup rugby.

Keywords: Rugby; Varsity Cup; Power Play.

BACKGROUND

The First National Bank (FNB) Varsity Cup (VC) tournament was launched in 2008 using the same concept as the National Collegiate Athletic Association (NCAA) Monday Night Football in the United States of America. The competition was introduced by its founders, Mr. Duitser Bosman and Mr. Francois Pienaar, to promote rugby at amateur level so that a pool of potential players could be identified by the South African Rugby Union (SARU) for possible selection to higher levels of play, such as Super Rugby and playing for national squads (Hodges *et al.*, 2014). The tournament aims to promote young talent (players must be below the age of 25 years) within the university environment (Sewry, 2014). The tournament comprises eight university teams who play each other once per season, alternating at home and away in a two-year period (Potgieter *et al.*, 2014).

The eight universities that participated in the inaugural Varsity Cup in 2008 were the University of Stellenbosch (US) Maties; Nelson Mandela Metropolitan University (NMMU) Madibaz; North-West University (NWU) Pukke; Tshwane University of Technology (TUT) Vikings; University of Cape Town (UCT) Ikeys; University of the Free State (UFS) Shimlas;

SAJR SPER, 42(3), 2020 Schoeman & Rall

University of Johannesburg (UJ) and University of Pretoria (UP) Tuks. Participating teams changed from 2008 to 2018 as promotion-relegation matches are played every two years between the last placed team in Varsity Cup (first tear) against the winner of the Varsity Shield competition. The Varsity Shield is comprised of second tear university teams and also play to the same rules and regulations that govern Varsity Cup rugby. US Maties won in the first three seasons (2008–2010), followed by UCT Ikeys (2011), UP Tuks (2012, 2013), UCT Ikeys (2014), UFS Shimlas (2015), NWU Pukke (2016), UP Tuks (2017) and US Maties (2018).

Participation rules of Varsity Cup Rugby

The SARU 2012 annual report emphasised that the successful implementation of the VC reinvigorated university-level rugby that provided the ideal stage on which players can display their skills (Potgieter *et al.*, 2014). VC rules stipulate that players must be students of the university for which they play, and that games take place at the universities' campuses (Hillhouse, 2013). In 2013, 18 players of each 23-man squad had to be full-time students. Every student was required to pass at least 30% of their courses in the previous year. In 2014, 20 players of each 23-man squad had to be full-time students, and from 2015 all players have to be full-time students (Rugby15, 2018).

Tournament rules of Varsity Cup rugby

SARU uses the VC as a platform to test and observe the outcomes of various law changes. It is important to understand the lead up to the 2018 season, as numerous changes in the laws for the VC was tried and tested. Some law changes have been discarded, and others were kept due to the popularity and uniqueness it brings to the competition. The overview will also provide the intensions of the multiple law changes adopted in the competition. Over the years, VC rugby has adopted unique rules during the various seasons as follows:

- 2013: Three points were awarded for a conversion kick and two points for penalties and drop goals (Sport24, 2017). The intention of the trial was to establish a try-scoring culture and promote rugby as a spectacle at university level. It has been suggested that by changing the point scoring system, tactical importance would shift from penalty kicks and drop goals to tries (Kraak et al., 2017).
- 2014 and 2015: Two referees officiated each game. Gripping patches were attached to the jerseys of the props to minimise the collapsing of scrums, and the free-kick mark was extended to the entire field (Sport24, 2017). The free kick law was implemented as follows from 2014 as stated by The Rugby Blog (2014):
 - A kick caught from the air (except a kick that starts or restarts the match) results in a free kick for the receiving team.
 - If the receiver does not indicate the free kick, the referee will automatically play advantage.
 - The referee can bring back play to the point where the catch was made if the advantage has not been used, and a free kick will be awarded.
 - The receiver has the right to call a free kick like any other free kick in the 22m-area and use it as such. Thus, it is exactly the same as a free kick in the 22m-area, just extended to the rest of the field.
 - The mark law in the 22m-area remains unchanged.
 - The free kick is named the free catch.
- 2016: Five points were awarded for a try when the try-scoring move originated in the

opponents' 22m-area, seven points when the try-scoring move originated between the opponents' 22m-area and the halfway line, and nine points when the try scoring move originated in the scoring team's own half (Rugby15, 2018). Conversions changed back to two points and the penalties and drop goals to three points, while only one referee officiated the games.

- 2017: The nine-point try was abolished after extensive reviews. Seven points were awarded when the try-scoring move originated in a team's own half and five points when the try-scoring move originated in the opposition's half. When a player received a red card, he had to leave the field immediately for twenty minutes and his team had to play with only 14 players. After twenty minutes, the team was allowed to send any of the other players from the 23-man squad on the field, but the player receiving the red card was not allowed back on the field.
- 2018: Three points were awarded for penalty- and drop kicks, and two points for conversions. If the attacking team's set play started between the halfway line and the opponent's try line, five points were awarded for a try, and when a team's "start of play" initiated in their own half, seven points were awarded for a try.

Lastly, in the 2018 season, the Power Play (PP) rule was introduced as follows (SARugbymag, 2017):

- During PP, a team can remove any two nominated backline players from the opposition for a period of three minutes' playing time.
- The removed players may re-join the match after three minutes' playing time, but may only
 return from their own dead-ball line. They may, however, return during play. A hooter will
 sound the start and end of the PP.
- If the opposition/defending team scores during this play, they will be awarded two extra points for that try.
- The PP may only be taken in a team's own half of the field and must be called by the captain.
- PP must be called before the start of a first phase (a penalty kick does not constitute a first phase).
- PP must be taken before the strategy break in the second half. If the team has not taken a PP, PP will be nominated directly after the strategy break or as soon as a yellow-/red-carded player returns. This will be indicated by the referee.
- Each team has one PP per match.
- The PP can be called irrespective of which team has possession.
- PP may not be called while the opposition is a player down due to a yellow or red card.
- PP will be signalled by the referee similar to a "PP signal" in cricket, after which a hooter will indicate the beginning and end of the PP.
- A match official next to the field will indicate the end of the PP by turning his back on the field of play and sounding the hooter.

Rule changes are crucial to sports development and are implemented for a variety of reasons (Kraak & Welman, 2014). The PP rule was implemented in the 2018 VC to promote running rugby with the expectation that the style would progress to the professional game. PP would also influence the defence strategies, planning and decision-making during a game (Kraak & Welman, 2014). Scarf *et al.* (2019) suggested that administrators attempt to incentivise more exciting play and hence more try-scoring. The International Rugby Board (IRB) (now known as World Rugby) also introduced Experimental Law Variations (ELVs) during the 2008 season of the Super 14 rugby union tournament (Lapasset, 2008). Varsity sport also introduced a PP in

Sevens rugby, netball, cricket and hockey. These PP's were characterised by either a numbers gain for an allotted time or the increase in points awarded for goals or tries. Except for rugby, very few sports have made use of a PP that reduces the number of players or change the scoring system. However, Batten *et al.* (2016) attempted to minimise the potential risk of serious head injury during hockey penalty corners, with structural changes that could make the sport safer.

The introduction of the PP law in the VC was controversial. However, Mr. Duitser Bosman, CEO of the Varsity Cup, mentioned that this innovative new rule will foster a generation of rugby players who will be able to defend with fewer teammates on the field and will know how to utilise a numerical advantage (SARugbymag, 2017) fully. Kraak *et al.* (2017) indicated that the law changes led to more tries being scored. However, the question remained whether rugby at university level improved as a spectacle.

PURPOSE OF RESEARCH

The aim of the current study was to analyse and evaluate the influence of the PP law in the 2018 VC on team strategy and implementation thereof during matches. The implementation of the PP law was widely criticised and the success of the rule questioned. The present study analysed the use of PP during the 2018 VC season and could provide valuable information as to the team tactics and scoring ability of teams during the PP. Coaches will be able to prepare according to the most common PP applications of opponents.

METHODOLOGY

Data collection

Data were collected by means of video analysis of all nine teams participating in the 2018 VC competition. The study did not use data on the performance of individual players, but rather on team performance during PP. Data were obtained throughout the nine rounds (7 games of each team excluding playoffs) of the VC competition and during the two play-off rounds, namely the semi-finals and the final. The VC rugby teams included in this study were:

- 1. Central University of Technology (FNB CUT);
- 2. Nelson Mandela Metropolitan University (FNB Madibaz);
- 3. North-West University (FNB NWU Pukke);
- 4. University of Cape Town (FNB Ikeys);
- 5. University of the Free State (FNB Shimlas);
- 6. University of Johannesburg (FNB UJ);
- 7. University of Pretoria (FNB Tuks);
- 8. University of Stellenbosch (FNB Maties); and
- 9. University of the Witwatersrand (FNB Wits).

Study design

The study used a mixed-method research process. Data were analysed from both the quantitative data collected during matches and qualitative data that was gathered by means of questionnaires with open-ended questions sent to the coaches. Mixed method research combines elements of qualitative and quantitative research (the use of qualitative and quantitative viewpoints, data collection and analysis and inference techniques) to gain an in-depth understanding and

corroboration (De Vos, 2005).

Quantitative data collection involved the analysis of video recordings that were broadcasted. The PP of both teams involved in 33 of the 39 matches played in the competition was analysed. The 6 matches not analysed was due to the lack of video footage as these matches were not broadcasted on television. Quantitative data during the matches recorded, noted and calculated the number of tries, penalties, conversions, points scored, players selected to leave the field, time point during the match when the PP was called, set phase restart option and the area of the restart on the field. Video recordings were supplied by the Cheetahs Pro 14 Franchise, Bloemfontein, South Africa, using the Verusco TryMaker Pro (Verusco Technologies Ltd.; Palmerston North, New Zealand). Verusco has a video recording database that includes all competitions played throughout the world over more than 10 seasons. Once the analyses were complete, 75% of all video recordings were analysed by an independent researcher to validate all counts recorded.

Table 1. OPEN-ENDED QUESTIONNAIRE ITEMS AND THREE MOST COMMON ANSWERS TO EACH QUESTION

Questions	Most common answers	n (%)
1. What were your aims and objectives during YOUR team's PP?	Tried to score as quickly as possible. Hanging on to the ball and ensure quick ball. Never kick.	10 (83.3) 7 (58.3) 11 (91.6)
2. What were your aims and objectives during your opponent's PP?	Soft line speed, did not implement a rush defence. Invite opposition to kick the ball. Call a close play, and we never kicked.	5 (41.6) 3 (25.0) 10 (83.3)
3. During a match, which factor(s) played a role in your decision to decide WHO to send off during your team's PP?	Abilities of opposition players. Environmental conditions. Own attacking options.	8 (66.6) 7 (58.3) 10 (83.3)
4. During a match, which factor(s) played a role in your decision to decide WHEN to call the PP?	If opposition scored. When players were still fresh. Environmental conditions.	11 (91.6) 5 (41.6) 6 (50.0)
5. Did you implement the PP in your training sessions, and if so, how?	No, did not spend much time preparing for it. Yes, had board sessions instead. No, too many scenarios.	10 (83.3) 2 (16.6) 10 (83.3)
6. Once the 2018 Varsity Cup ended, what was your opinion about the PP that had been implemented?	Power play failed as a new rule. Had the opposite outcome than was hoped for. Opposition (with 13 players) slowed down play.	12 (100) 11 (91.6) 10 (83.3)

N=12 respondents

For the purpose of the study, the researchers recorded qualitative data by means of a questionnaire to obtain the perceptions of the PP by the coaching staff involved with a VC team during the 2018 season. The questionnaire could be completed by any one of the coaches in the

coaching staff who wished to participate. The six open-ended questions asked in the questionnaire are listed in Table 1. Malterud (2001) stated that qualitative research involves the systematic collection, organisation and interpretation of textual material derived from talks or observation.

After consent was provided by the participating coaches, the coaches were contacted via Email to provide feedback on the questions. The aim of the study was explained to all participating coaches on the questionnaire. Quantitative data were captured in Microsoft Excel 2007 and subsequently converted into a SAS data set. Data were statistically analysed by a biostatistician from the UFS Statistical Consultation Unit.

Statistical analysis

Quantitative data were summarised using descriptive statistics, namely frequencies and percentages for categorical and numerical data. Similarly, qualitative data were analysed descriptively. The different responses to each of the six open-ended questions (see Table 1) were grouped manually, and the frequencies and percentages of the three most common responses to each question were listed.

Ethical clearance

The full protocol describing the research methodology was submitted to the Health Sciences Research Ethics Committee of the Faculty of Health Sciences, UFS. After evaluation of the protocol by the Committee, approval to continue with the research was granted under ethics clearance number UFS-HSD2018/1252/3010.

RESULTS AND DISCUSSION

Qualitative data were collected by means of a questionnaire consisting of six questions and distributed to the coaching staff of the nine teams involved in the 2018 Varsity Cup season. A total of 27 questionnaires were sent (three to each participating team), with 12 questionnaires returned (response rate 44.4%). Quantitative data were collected from a total of 33 VC games during the 2018 season for analysis, resulting in 66 PPs for the season.

Qualitative findings

Based on Table 1, coaches generally agreed on most of the questions asked. They were of the opinion that the two most important areas of concern when calling the PP, were to score as quickly as possible and not to kick the ball during their team's PP. A typical response was:

In our Power Play we obviously tried to score as quickly as possible, hanging on to the ball and make sure about quick ball. Never kick except if it is to score from.

The teams who called the PP scored fourteen tries, opposed to the teams who did not call the PP and scored only seven tries. The team calling the PP scored a total of 110 points, while the opposing team (not calling the PP) scored 43 points. One coach commented:

The teams calling the PP conceded seven tries, probably because of the relatively high rate of unforced errors and could be due to the pressure of scoring within the short time limit. The main focus of teams calling the PP was on structuring the attack rather than their defence which caused them to be unprepared for when the opponents attacked and contributed to high unforced errors.

Teams who did not call the PP would opt to kick at goal to slow down play and ensure that the PP time runs out. As penalty-kick success has increased, administrators have introduced rule changes (Wright, 2014) that allow more attacking rugby and more tries. Maintaining the balance between open rugby (more tries, more excitement) and defensive rugby (less tries, more penalties, less exciting rugby), but neglecting the excitement derived from close outcomes (Scarf *et al.*, 2019). One coach replied:

PP missed the mark, like most varsity cup initiatives, I felt that it had the opposite outcome than was hoped for.

The aims and objectives of coaches during the opponent's PP was to keep the ball close when in possession of the ball. Coaches also wanted to prevent their team from kicking the ball away once possession was gained.

During their Power Play we had a soft line speed and did not implement a rush defence. We would invite them to kick the ball in order for us to get possession. Once we had possession we would play what we call a close play with very little risk of turning the ball over and we never kicked it.

Coaches agreed that the team's own attacking options played a role in deciding who to send off during the PP, followed by the strengths of players from the opposition and the environmental conditions.

Based on what we felt would be the best option for a specific game, keeping own abilities, opposition players and conditions in mind, normally players 12 and 13, it makes defence from set phase very difficult. If you want to attack with kicking it is maybe wiser to take off 11/14 and 15.

As shown in Table 2, the two centres, players 12 (29.5%) and 13 (27.2%), were called off most often during PPs, due to the general strength of these players as tacklers and their important role in the organisation of the defence (Cahill *et al.*, 2012). This was confirmed by a coach:

We always have a look at their best defenders and who seem to organise their defence and sometimes (in the first two matches) we went for their playmaker. The disorganisation of defence was in the end the go-to strategy for us.

Plaver Player Plaver Plaver Plaver Plaver Player 9 10 11 12 13 14 15 n (%) Number of times 12 (9.1) 15 (11.3) 6(4.5)39 (29.5) 36 (27.2) 1(0.7)23 (17.4) called off (mean)

Table 2. PLAYERS CALLED OFF DURING PP

N=132 players called off in 66 PPs

Key defensive zones will only be covered if the defenders stay strong and square in their zones. Thus, if the defenders are called off, the zones will not be covered (Westgate, 2018). The two centres have the highest collision rate (Schoeman *et al.*, 2015). Schoeman *et al.* (2015) also reported that the inside centre (number 12) had a significantly higher rate of collisions than the outside centre (number 13). The second most popular position to be sent-off was the full-back (number 15). The defending team will be without a last line of defence, leaving them vulnerable to an attacking kick.

The scrum half and the fly half are considered generals on the field (Ref). They play an important role in decision making and determine the pace of the game. The fly half is the communicator of the game plan, and the scrum half is the link between the backline and the forwards. Therefore, their removal can cause a disruption in team communication. Sasaki *et al.* (2017) determined the tactical leader of high-level rugby teams (2015 Rugby World Cup) and analysed the impact of defensive actions on the outcome of the game. This revealed the existence of decisive relational structures where the highest turnover performance would contribute to the winning game, and that certain individuals play key roles in the game (the fly half). When calling the PP, coaches' decisions were mainly based upon whether the opponents scored, if their players were not fatigued and what the environmental conditions were like.

We always tried to call it from a scrum and first prize was a middle scrum. The rules helped in that regard. If they score we can call a Power Play and have a scrum on the halfway line 15m in from touch. We did not call it too early in the game and on two occasions we did not call it at all. The ref would have to call it then after the second strategy break. That meant that you could possibly have a defensive Power Play. For example – you are in your 22 and it is their feed in the scrum or line out but they only have 13 attackers.

As seen in Table 3, most PPs were called during the second and third quarters (n=20 and n=22, respectively). The least PPs were called in the first quarter (n=7), while there were none of the second PPs called during the first quarter. PP was called automatically only five times, which is when the second PP have not been called before the 60th minute of the match and resulted in the PP being called in the fourth quarter at the first break of play in a team's own half.

	Quarter 1 n (%)	Quarter 2 n (%)	Quarter 3 n (%)	Quarter 4 n (%)	Automatic call n (%)
First PP	7 (10.6)	13 (19.7)	13 (19.7)	1 (1.5)	0 (0)
Second PP	0 (0)	7 (10.6)	9 (13.6)	11 (16.7)	5 (7.6)
Total	7 (10.6)	20 (30.3)	22 (33.3)	12 (18.2)	5 (7.6)

Table 3. TIME OF POWER PLAY CALLED

N=66 PPs observed

During the first quarter, only one-of the two PPs were called. At the start of the season, the teams did not call any PPs during the first quarter, apparently because of the unfamiliarity with the new PP rule. Most of the first PPs were called during the second and the third quarters of the game. Most of these PPs were called just after the first strategy break (after 20 minutes of play) or at the start of the second half of the game. The intention was for the teams to try and score directly after the break or after half-time, which would have a psychological effect on both teams. Den Hartigh and Gernigon (2018) reported that psychological momentum (PM) perceptions increased for participants in the positive momentum condition, but decreased rapidly for participants in the negative momentum condition.

A team scoring just after a break can contribute to the momentum of the team. This causes frustration in the opposing team, which will influence how they play. In addition, the time-out led to a loss of PM in the positive momentum condition, but resulted in recovery of PM in the negative momentum condition (Den Hartigh & Gernigon, 2018). In the fourth quarter, only one

first PP was called, while six out of the seventeen second PPs were automatic calls. An automatic call resulted in a disadvantage for the team receiving the PP, as they did not have control over the starting position of their PP or who had possession of the ball at the start of the PP. Two typical responses by coaches on how they decided to start their PP were as follows:

We called the PP after the opposition scored – that gave us the option to have a pre-planned attack from a scrum on the left/right.

The captain and management decided on calling it early while our players are fresh to win our set piece. We also try to score as early as possible to put us in a good position.

In the beginning of the season, the automatic call was not implemented as it should have been. In several matches, the game continued after 60 minutes without implementing the PP. This happened because off-field referees did not notify the on-field referee, or because off-field referees were not aware of the proper implementation of the rule. When coaches were asked if they would implement the PP in training sessions, the overwhelming answer was no. Coaches felt that there were too many unknown factors in the PP and that they could not really prepare for it.

No, we did not spend much preparing for it. We had board sessions instead. You don't really practise for something that will only last a fraction of a game. Power Play only influences your defence, attack with 13 players almost impossible, except when you keep it narrow and slow. You do not know beforehand which of your players will leave the field, therefore, to practise every scenario will take too long. First phase defence is a nightmare with 13 players, where opposition should score every time, but don't because of sloppy attack. Normal defence system applies when you are outnumbered, shadow and drift defence.

When reflecting on the 2018 Varsity Cup PP rule, the coaches were unanimous that the rule failed the intended outcome and had the opposite effect than was hoped for.

Power Play missed the mark, like most varsity cup initiatives. I felt that it had the opposite outcome than was hoped for. Most varsity cup teams play with inexperienced players, who feel pressure to score when the opponents have 13 players on the field. Therefore, they make a mess of clear try scoring opportunities. When the opposition [with 13] then get the ball they slow play down to run the time out.

 Start position

 Left scrum
 Right scrum
 Middle scrum
 Lineout

 n (%)
 n (%)
 n (%)

 22 (33.3)
 32 (48.5)
 12 (18.2)
 0 (0)

Table 4. STARTING POSITIONS OF PP

N=66 PPs

As seen in Table 4, the most popular starting position for a PP was a right-side scrum (48.4%), followed by the left scrum (33.3%) and the scrum starting from the middle of the field (18.1%). The least popular starting position for a PP was a lineout (0%). The most common area from where the PP started, was with a scrum on the right-hand side of the field. This could be due to the fact that most backline players are right-handed and pass more accurately to the left. However, when the scrum is on the left-hand side, the opposing scrum half is restricted behind the scrum resulting in one less defender. One coach commented:

SAJR SPER, 42(3), 2020 Schoeman & Rall

It was not easy to call PP. You don't often get the right set piece in the specified areas off the field where you are allowed to call it. I mostly called it after we conceded points. We tried to get a middle scrum [like when they kick out directly from a kick-off, or a scrum near the middle of field].

Most surprising probably was that no team selected the lineout as a starting position, as lineouts can be useful as an attacking platform. This finding was in contrast to Kraak *et al.* (2017), who reported that attacking teams would rather kick a potentially kickable penalty to touch to create a platform to score a try, in order to have an opportunity to receive eight rather than two points for a successful penalty kick. However, the lineout during PP can be more risky than a scrum due to better contesting during lineouts. Kraak *et al.* (2017) further observed an increase in the number of lineouts and mauls, as well as tries scored from successful mauls. Attacking teams opted to play the wider channel to exploit the weakness in the opponent's defence, especially when the outside backs were sent off. The tactic would change when the centres or fly half were sent off because there was a disruption in the midfield defence. This would be exploited by using a short lineout by allowing the extra forwards to attack in the disrupted defensive channel.

Table 5. MATCH EVENTS DURING PP (66 PPs)

Events	Attacking	Defending
Knock-on	27	10
Forward pass	2	0
Penalties	28	20
Scrum	2	1
Quick tap	15	3
Lineout	11	13
Poles	0	3
Lineout	26	30
Maul	4	8
Turnover	2	2
Scrums	81	34
Blind	4	0
Direct backline	43	9
Lost	8	0
8 th man pick-up	0	2
Kicks	23	23
Cross-kicks	3	0

Table 5 shows that the most common mistakes made by teams were the knock-on and penalties. The objective of the team calling the PP was to spread the ball wide and score a try. If one of the players sent off was the fullback or wing, their tactic would be to execute an attacking kick, for example a kick chase, a cross-kick or a chip kick. When the two centres were called off, the players would make contact in the midfield in order to create space out wide. The

short amount of time during the PP led to over-eagerness and pressure, which caused the high unforced error rate. Due to the wider spaces, the players would focus too much on the open space, rather than on catching the ball, which caused them to knock on. Maintaining ball possession is crucial during the PP. The players want to arrive at the ruck first to secure the ball, yet again with over-eagerness, they would concede a penalty. One coach mentioned that

Most varsity cup teams play with inexperienced players, who feel pressure to score when the opponents have 13 players on the field. Therefore they make a mess of clear try scoring opportunities. When the opposition [with 13] then get the ball they slow play down to run the time out.

When the team calling the PP lost the ball, they would be very aggressive at the break downs and tried to force a turnover, which led to penalties for not adhering to ruck laws. The team not calling the PP would mainly focus on passing the time. During defence, the players would not commit to the rucks and rather spread out to cover the whole field. When the players received the ball, they would keep it close with the forwards or pick and drive to pass the time. When the team received a penalty, they would attempt a shot at goal. During lineouts and scrums, the players would take as much time as possible to get into position. Many scrumhalves of the opposing team would wait until the referee instructed them to pass the ball to maximise ball in the ruck time.

CONCLUSIONS AND RECOMMENDATIONS

The study aimed to analyse and evaluate the influence of the PP law in the 2018 VC on team strategy and the implementation thereof during matches. The PP was implemented in Varsity Cup rugby with the objective to promote running rugby. This attempt was not successful. Due to the many errors made by teams, stoppages rather than running rugby tended to dominate during the PP.

The strategies employed by the teams were twofold. Attacking teams attempted to spread the ball wide, but made crucial errors due to the pressure of having to score while the opponents have two less players on the field. Defending teams aimed to widen their defence and to slow the ball down as much as possible in order to wind down the clock. This in turn had a negative effect on the PP rule. PP during any sport evokes excitement with the crowd, but the implementation and effectiveness on the intended outcome of such a PP should be evaluated according to the benefit of the sport and not for the spectators. The essence of any sport should not be lost or jeopardised to accommodate excitement and interest in the sport

The PP was also unsuccessful because of the lack of knowledge of the referees about the PP rules, which contributed to the PP not being implemented correctly. These implementation errors included a strategy break starting in the middle of a PP and the PP not being continued afterwards, resulting in the PP being only two minutes long. The PP might be successful if it were implemented correctly and focussed on during practice sessions. The PP was not implemented during practice sessions, because of the lack of interest in the PP by the coaches. Many coaches believed that the PP rule will not be implemented in future VC tournaments and therefore did not give it the necessary attention.

The PP contributes to the unique character of university rugby within the VC tournament, however, it can be recommended that coaches, players and match officials must receive proper instructions and training in the implementation of the PP. The involvement of coaches in the decision-making process and implementation of new rules is crucial. Coaches can provide solutions and perhaps more effective execution of the PP if consulted, and may shed light on

other problematic areas within the game to be improved. Further suggestions would include to minimise the number of innovations within the competition and rather execute the lesser number of rule changes perfectly. This will ensure less confusion on the field, but will certainly keep the game attractive for all to watch.

Acknowledgements

Steyn Swart, Janke Heymans, Christel-Mari Jacobs and Dalene Kramer, postgraduate students in the Department of Sport and Exercise Sciences, for data collection; and Dr. Daleen Struwig, medical writer/editor, Faculty of Health Sciences, University of the Free State, for technical and editorial preparation of the manuscript.

REFERENCES

- BATTEN, J.; WHITE, A.J. & ANDERSON, E. (2016). Preventing penalty corner injuries and head trauma in field hockey: time to consider the power play? *British Journal of Sports Medicine*, 50(11): 639-640.
- CAHILL, N.; LAMB, K.; WORSFOLD, P.; HEADEY, R. & MURRAY, S. (2012). The movement characteristics of English Premiership rugby union players. *Journal of Sport Sciences*. 31(3): 229-237.
- DEN HARTIGH, R.J.R. & GERNIGON, C. (2018). Time-out! How psychological momentum builds up and breaks down in table tennis. *Journal of Sports Sciences*, 36(23): 2732-2737.
- DE VOS, A.S. (2005). Combined quantitative and qualitative approach. In: A.S. de Vos, H. Strydom, C.B. Fouché & C.S.L. Delport (Eds.), *Research at Grass Roots for the social sciences and human service professions* (2nd ed.), pp. 366-372. Pretoria, South Africa: Van Schaik Publishers.
- HILLHOUSE, M. (2013). Injury surveillance during the 2011 FNB Varsity Cup rugby season. Unpublished master's thesis. Stellenbosch, South Africa: Stellenbosch University. Hyperlink: [scholar.sun.ac.za/handle/10019.1/100484]. Retrieved on 7 May 2019.
- HODGES, S.L.; KEYTER, A.K.; TARR, M.D.; SERRA, P. & SURUJLAL, J. (2014). Influence of commercialisation of university sport on sporting values: a case of the Varsity Rugby Cup. *African Journal for Physical, Health Education, Recreation and Dance,* 2(Suppl. 2): 394-407.
- KRAAK, W. & WELMAN, K. (2014). Ruck-play as performance indicator during the 2010 Six Nations Championship. *International Journal of Sports Science and Coaching*, 9(3): 525-537.
- KRAAK, W.; WELMAN, K.; CARRERAS, D. & VAZ, L. (2017). Modifying scoring system at South African university rugby level changes game dynamics. *South African Journal for Research in Sport, Physical Education and Recreation*, 39(2): 89-100.
- LAPASSET, B. (2008). 2004–2009 Experimental Law Variations (ELVs). Hyperlink: [http://www.rugbyfootballhistory.com/2004-2009-ELVs.html]. Retrieved on 24 June 2020.
- MALTERUD, K. (2001). Qualitative research: Standards, challenges, and guidelines. *Lancet*, 358(9280): 483-488.
- POTGIETER, S.; VISSER, J.; CROUKAMP, I.; MARKIDES, M.; NASCIMENTO, J. & SCOTT, K. (2014). Body composition and habitual and match-day dietary intake of the FNB Maties Varsity Cup rugby players. *South African Journal of Sports Medicine*, 26(2): 35-43.
- RUGBY15 (2018). Varsity Rugby values penalties and drop goals. Hyperlink: [http://www.rugby15.co.za/varsity-rugby-values-penalties-and-drop-goals/]. Retrieved on 7 May 2019.

- SARUGBYMAG (2017). 'Power Play' for 2018 Varsity Cup''. Hyperlink: [https://www.sarugbymag.co.za/power-play-2018-varsity-cup/]. Retrieved on 1 September 2020.
- SASAKI, K.; YAMAMOTO, T.; MIYAO, M.; KATSUTA, T. & KONO, I. (2017). Network centrality analysis to determine the tactical leader of a sports team. *International Journal of Performance Analysis in Sport*, 17(6): 822-831.
- SCARF, P.; PARMA, R. & McHALE, I. (2019). On outcome uncertainty and scoring rates in sport: The case of international rugby union. *European Journal of Operational Research*, 273(2): 721-730.
- SCHOEMAN, R.; COETZEE, D. & SCHALL, R. (2015). Positional tackle and collision rates in Super Rugby. *International Journal of Performance Analysis in Sport*, 15(3): 1022-1036
- SEWRY, N. (2014). Key performance indicators and predictors in Varsity Cup rugby. Unpublished master's thesis. Cape Town, South Africa: University of Cape Town. Hyperlink: [https://open.uct.ac.za/handle/11427/13267]. Retrieved on 7 May 2019.
- SPORT24 (2017). Varsity Cup to boost SA Rugby. Hyperlink: [http://www.sport24.co.za/Rugby/Varsity-Cup-to-boost-SA-rugby-20080905]. Retrieved on 7 May 2019.
- THE RUGBY BLOG (2014). South Africa's Varsity Cup to trial 'free catch rule'. Hyperlink: [https://www.therugbyblog.com/south-africas-varsity-cup-to-trial-free-catch-rule/]. Retrieved on 25 August 2020.
- WESTGATE, P. (2018). *The principles and techniques of defence in Rugby Union*. Hyperlink: [http://www.agard.rugby.hu/letolt/EDZOI/071030AVedekezesAlapelveiesTechnikai.pdf]. Retrieved on 7 May 2019.
- WRIGHT, M. (2014). OR analysis of sporting rules: A survey. European Journal of Operational Research, 232(1): 1-8.

Corresponding author: Dr. Riaan Schoeman; Email: schoemanr@ufs.ac.za

(Subject editor: Dr. Pieter van den Berg)