Comparing club level rugby coaches and players' perceptions of coaching effectiveness

R. BROODRYK, P.H. VAN DEN BERG, A. KRUGER AND S.M. ELLIS

*North-West University, Potchefstroom Campus, Potchefstroom 2520, South Africa.
E-mail:retief.brooddryk@nwu.ac.za*

Abstract

The objective of this study was to compare players' and coaches' perceptions on coaching effectiveness. A total of 155 participants from the Puk Rugby institute (PRI) were available for this study (players, n = 142; coaches, n =13) (age: 18-55 years). Coaches completed the Coaching efficacy scale (CES) and players completed the adapted CES. The CES consists of 24 items measuring four constructs namely motivation, game strategy, technique and character building. Each item was rated on a 10 point Likert scale ranging from 0 (not at all effective) to 9 (extremely effective). High Cronbach alpha values were established for all four constructs on this specific population. Mixed models results indicated a statistical significant difference (p ≤ 0.05) on all four constructs measured when the perceptions of coaches and players were compared. A statistical significant difference exists between the coaches and players' perception regarding the respective coaches' total coaching effectiveness. In view of the inconsistent pattern found between the coaches and players perceptions on coaching effectiveness, coaches and clubs need to be more aware of the impact that players' perceptions have regarding the outcome of coaching effectiveness.

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Introduction

Effective coaching influences a variety of areas like sport performance, players' behaviour, well being, development of moral values and character building (Horn, 2002; Baker, Yardley & Côté, 2003; Danish, Petitpas & Bruce, 2008). In addition with effective coaching, sport can also be used as an arena for the development and facilitation of various life skills among youth which could be applied to life situations outside the sport milieu for example, goal setting, emotional control, self-esteem and hard work ethic (Gould, Chung, Smith & White, 2006). Although effective coaching is crucial, the measurement thereof can be seen as complex.

The complexity of sport and all the variables that exist as part of the coaching process was identified as the biggest challenges to determine effective coaching

(Lyle, 2002). To add to the complication of determining effective coaching, one also needs to understand that coaches' motivation for coaching may be performance-or participation orientated (Vella, Oades & Crowe, 2010). Regardless of the difference in coaching orientation, Mallet and Côté (2006) stressed that all forms of coaching should be equally valued and respected; therefore measuring coaching effectiveness is imperative.

For the purpose of this study it is important to understand coaching efficacy and coaching effectiveness as two different concepts. Coaching efficacy is defined as "the extent to which coaches believe that they have the capacity to influence the learning and performance of their athletes" (Feltz, Chase, Moritz & Sullivan, 1999:765). Coaching effectiveness on the other hand is defined as "the extent to which coaches can implement their knowledge and skills to positively affect the learning and performance of their players" (Boardley, Kavussanu & Ring, 2008: 271). Efficacy therefore has a direct perception orientated connection with the assessment of coaching where effectiveness refers to the implementation of coaching skills, influencing the players' perceptions. In other words, the coach's perception refers to coaching efficacy while the players' perceptions refer to coaching effectiveness.

Past researchers suggested that the Coaching Efficacy Scale (CES) should be used as measuring tool to determine the coach's perception on his/her own coaching efficacy (Fung, 2003; Vargas-Tonsing, Warners & Feltz, 2003; Campbell & Sullivan, 2005; Boardley et al*.,* 2008; Kavusannu, Boardley, Jutkiewicz, Vincent & Ring, 2008; Feltz, Hepler & Roman*,* 2009; Malete & Sullivan, 2009). Results of previous studies that used the CES indicated that the coaches' perceptions positively influence diverse areas such as the coaches' affective and normative commitment (Kent & Sullivan, 2003), coaching behaviour, team satisfaction, winning percentages (Myers, Vargas-Tonsing & Feltz, 2005) and team efficacy (Vargas-Tonsing et al., 2003). The importance of players' perception on coaching effectiveness has also been recognized (Horn, 2002; Short & Short, 2004; Myers et al., 2006; Boardley et al., 2008). Boardley et al. (2008) for instance found that players' commitment, enjoyment, effort and self-efficacy relates to the players' perceptions. Irrespective of the importance of players' perceptions, only a few studies have used the newly adapted CES to measure players' perceptions regarding perceived coaching effectiveness (Boardley et al., 2008; Kavusannu et al*.,* 2008; Broodryk & van den Berg, 2011).

Despite the importance of both the coaches and players' perceptions, one need to realize that perception on coaching effectiveness differs among coaches and players (Short & Short, 2004; Kavussanu et al., 2008). Short and Short (2004) investigated 9 intercollegiate male football coaches who completed the CES and compared their results with the athletes' values on how confident they perceived their coach to be. The majority of the coaches (78%) rated themselves higher

than their athletes did. Using the adapted version of the CES, Kavussanu et al. (2008) found that the perceptions of the players' compared to the perceptions of the coaches regarding overall coaching effectiveness were statistical significantly lower. The coaches' perception values were also significantly higher than the players' perception values on all four constructs measured (Kavussanu et al., 2008). Kenow and Williams (1999) investigated the perception differences between coaches and players regarding effective coaching behaviours and found that coaches rated their behaviours more positive than their athletes do. Similarly, Vargas-Tonsing, Myers, and Feltz (2004) investigated the use of efficacy enhancing techniques regarding the frequency and effectiveness thereof. It was found that an incongruency exist between the players' and coaches' perceptions concerning the frequency and effectiveness of the efficacy enhancing techniques. Previous evidence therefore indicates that coaches and players' perceptions on coaching effectiveness differ. Kavussanu et al. (2008) identified the need for more research that compares the perceptions of the coach and his/her respective players on the four constructs of the CES.

The purpose of the study was therefore to compare the players and coaches' perceptions with regard to the coaches' coaching effectiveness in order to determine if the same pattern will present itself where coaches rate themselves more positive than their players perceive them to be (Kavussanu et al., 2008).

These results extend the literature on coaching effectiveness and coaching efficacy to determine if any perception differences exist between a coach and his/her players with regard to coaching effectiveness. The comparison between coaches and players' perceptions on coaching effectiveness might also give an indication of the coaching effectiveness that exists amongst university and club level coaches. The results may reflect the value of the players' perception regarding their relative coaches coaching effectiveness. The results may provide clubs, institutions, coaches and professionals who are involved in sports a means to evaluate coaching effectiveness and compare their results with the results from this study. It will also aid researchers in the development of coaching models, processes and methods to scrutinize coaching effectiveness.

Methodology

Participants

This was an availability study and one hundred and forty two players (n=142) and thirteen coaches (n=13) from the North-West University, Puk Rugby Institute (PRI) in Potchefstroom, South Africa took part in the study. All the participants were males. The coaches' age ranged from 23-55 years and the players' ages ranged between 18-25 years. A total of one hundred and thirty

three questionnaires were correctly completed by the players, while all thirteen coaches' questionnaires were correctly filled (players n=133, coaches n=13).

Procedures

All participants took part on a voluntary basis with the option to withdraw at any time. None of the teams' respective coaches were present during the collection of the data from the players and the anonymous nature of the study was emphasized. The purpose of the questionnaires was thoroughly explained to the players and coaches. Participants had the freedom to ask any questions during the completion of the questionnaire and words or questions which they did not understand were explained to them. A sport psychological consultant was present during the completion of the questionnaires in order to provide assistance to participants regarding any questions, or to explain terminology where needed.

Questionnaire

The coaches completed the CES developed by Feltz et al. (1999), while the players were asked to complete the adapted version of the Coaching Efficacy Scale (Kavussanu et al., 2008). The study was approved by the Ethics committee of the North-West University (NWU-00008-12-S1). Both the CES and the adapted CES tested the following four constructs: 1) motivation, 2) game strategy, 3) technique and 4) character building (Feltz et al. 1999). Important to note is that the 24 items of both questionnaires are the same, while only the stem differed. The stem question for the CES was: "How confident are you in your ability to…" (Feltz *et al*., 1999:767) and the stem question for the adapted CES was: "How effective is your coach in his/her ability to…" (Kavusannu *et al*., 2008:389). Feltz et al. (1999) defined the constructs as follows: motivation is the coaches' confidence in their ability to influence the psychological skills and states of the players; game strategy as the coaches' belief in their ability to coach and lead their team to a successful performance during competition; technique has been referred to as the coaches' beliefs regarding their instructional and diagnostic skills and abilities, while character building concerns the coaches' beliefs in their ability to influence their players' personal development and positive attitude towards sport. A 10-point Likert scale was used with anchors of 0 (not at all confident) and 9 (extremely confident) to determine the perception of coaching effectiveness.

Statistical procedures

The Statistical Consultation Service of the North-West University performed the statistical analysis of the research data. SPSS software (version 21.0, Armonk, NY: IBM corp.) statistical package was used to process the data. Using AMOS 21.0, Confirmatory factor analysis (CFA) was used for the examination of the

adapted scale's factor structure as illustrated in figure 1, indicating construct validity for this population. No CFA was performed for the CES due to the small (13) number of coaches that participated in the study. All regression estimates were found statistically significant at $p<0.05$ implying that the respective items loaded significantly on the specified constructs with standardized regression weights of between 0.67 and 0.91, indicating convergent validity. The chi-square test has the power to detect trivial deviations from the proposed model and it is viewed by researchers as an overly strict indicator of model fit (Hancock & Mueller, 2010). The chi-square statistics were therefore divided by the degrees of freedom as suggested by Mueller (1996). The four-factor model yielded a Minimum Sample Discrepancy divided by Degrees of Freedom (CMIN/DF) value of 2.135, which represents a satisfactory model fit as the value is <3 (Mueller, 1996). Reporting multiple fit indices from three broad classes is considered as good practice (Hancock & Mueller, 2010). Comparative fit index (CFI) with values of 0.909 indicated a good overall fit (Mueller, 1996). The Root Mean Square Error of Approximation (RMSEA) of 0.088 together with 90% confidence interval of [0.078:0.099] is acceptable (Blunch, 2008). Blunch (2008) stated that models with RMSEA values of ≥ 0.10 should not be accepted.

The Cronbach alpha was used to determine the reliability of the questionnaire for the specific groups. According to Cortina (1993) a value of > 0.70 for Cronbach alpha are considered an adequate value for reliability. Sufficiently high Cronbach alpha values were computed: motivation = 0.94; game strategy = 0.91; technique = 0.90; character building = 0.86 (Cortina, 1993) to ensure validity. All items had correlations of larger than 0.65 with their respective construct totals, indicating that the items are all discriminating with regard to the construct.

Understanding that dependency exists among the players and their respective coaches it is important to adjust for inter-dependency between these players being coached by the same coach. In order to adjust for non independency, hierarchical linear models (mixed models) were used to compare the difference between the coaches and players' perception on coaching effectiveness with the level of significance set at 5%. Descriptive statistics of each construct was also calculated to compare the individual difference between the respective coaches' and their team's perception on coaching effectiveness.
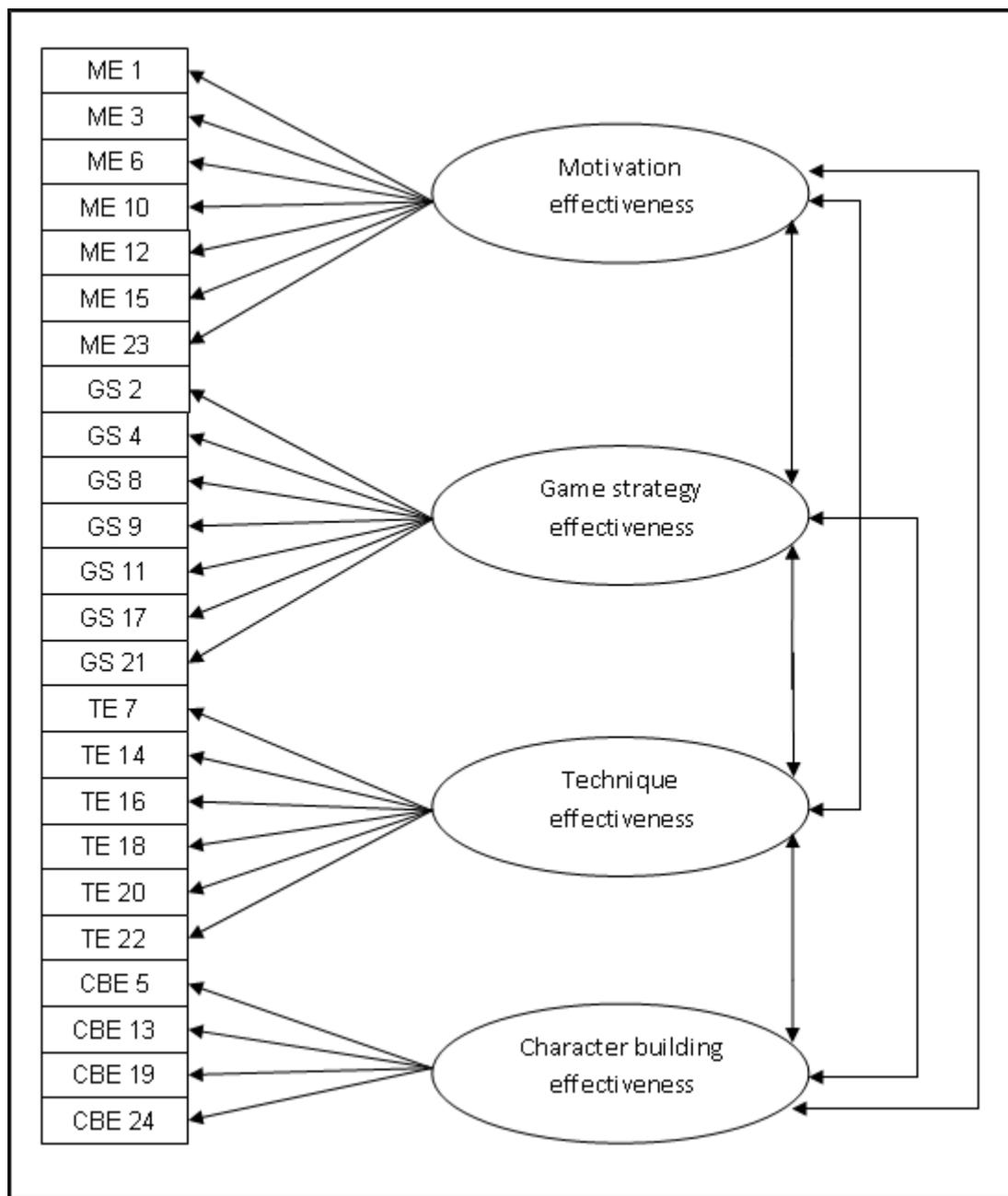
Figure 1: Multidimensional model of the adapted Coaching Efficacy Scale (Boardley et al., 2008).

Results and Discussion

The correlations between the four subscales were statistical significantly interrelated with high correlations as indicated in Table 1 which is consistent with previous research (Boardley et al., 2008).

The highest correlation was found between the constructs: technique and effectiveness of game strategy, while the lowest correlation was found between the game strategy and motivation constructs.

Table 1: Correlations between constructs among players

Constructs	1	2	3
1. Motivation efficacy			
2. Game strategy efficacy	.82*		
3. Technique efficacy	.87*	.95*	
4. Character building efficacy	.92*	.84*	.92*

*Note. *p<0.05.*

Because of the interdependence of players with regard to their respective coaches, hierarchical linear models were used to take this into account. The results for the total group on the 4 different constructs measured are illustrated in Figure 2. The players' perceptions compared with the coaches' perceptions regarding the respective coaches' effectiveness on motivation, game strategy, technique and character building all yielded statistical significant differences. Cohen's d-values were calculated as an effect size to determine the importance of this in practice. Low d values (motivation: 0.21, game strategy: 0.18, technique: 0.22, character building: 0.21) were found for all 4 constructs implying that none of these differences were important in practice.
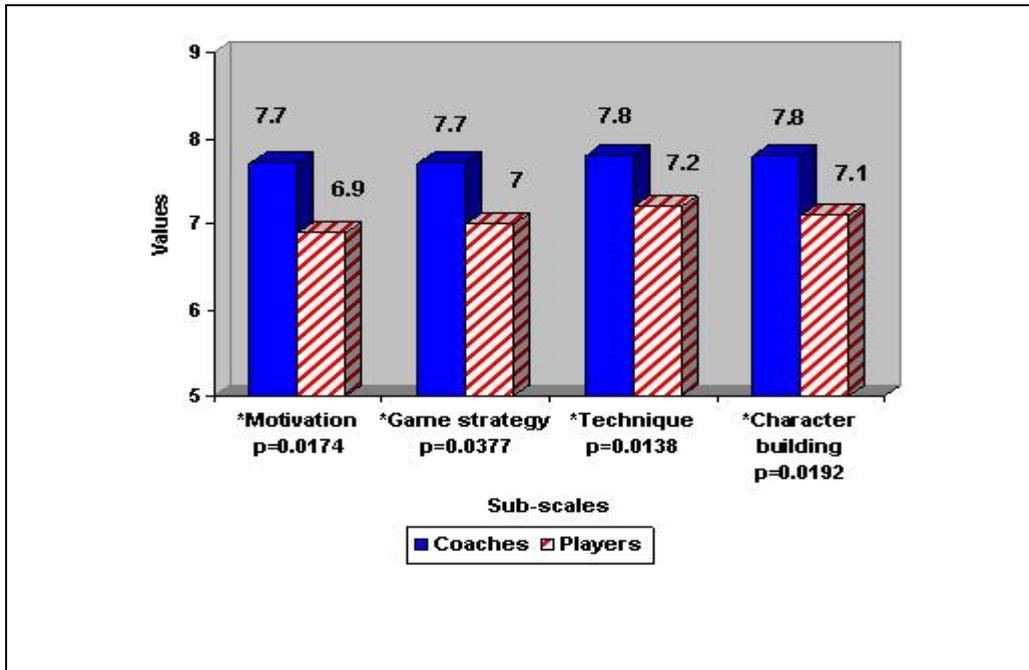
Figure 2: Mean values of coaches' perception on coaching efficacy compared to players' perceptions of perceived coaching effectiveness (Note. *p≤.05).

It is clear that on all four constructs, the coaches' perceptions are higher than the players' perceptions for the whole group. The biggest difference of 0.8 between players and coaches perceptions was found on the motivation construct and the smallest difference was found for the technique construct with a value of 0.6. The game strategy and character building constructs both yielded differences of 0.7. Short and Short (2004) found similar results when 9 basketball coaches' perceptions were compared with their respective players' perceptions regarding coaching effectiveness. The majority (7) of the coaches rated themselves more positive compared to their players (Short & Short, 2004). Kavussanu et al. (2008) also compared the perceptions of players and coaches from 7 individual and 8 team sports and reported that the coaches' perceptions regarding their own coaching effectiveness were significantly higher than their players' perceptions on all four constructs.

The significant perception difference (p=0.017) found for the motivation construct is a point of concern when keeping in mind that motivation as perceived by the players has a direct influence on the players' effort, commitment and sport enjoyment (Boardley et al., 2008). A positive relationship also exists between motivation and self-efficacy which in turn might lead to more self-confidence among the players (Boardley et al., 2008). Similarly Kavusannu et al. (2008) found in their study that 42% of the coaches rated themselves higher regarding the motivation construct. Understanding the value of this dimension the ideal would be if the perception difference between coaches and their players are small or if the players' perceptions concerning perceived motivation are higher. Large differences amongst the coach and his players' perceptions on motivation may lead to negative effects such as frustration and loss of self-confidence amongst the players (Kenow & Williams, 1999).

Regarding game strategy, the results (p=0.038) is also congruent with the results of Kavusannu et al. (2008) who reported that the coaches rated themselves more positive regarding the whole group, although respectively 50% of the coaches' perceptions were similar to their players' perceptions. Chu and Tingzon (2009) stressed the importance of perceived game strategy effectiveness when they found that game strategy directly affected the players' self-efficacy.

The same blueprint can be seen for the technique construct where coaches' perceptions are significantly higher (p=0.014) than the players' perceptions, which again is in line with the findings of Kavusannu et al. (2008) who indicated that 58% of the coaches' perceptions regarding technique were higher than their players' perceptions. According to Boardley et al. (2008) a coach who is able to model a certain skill will positively influence the players' self-efficacy and self-confidence which in turn might benefit the coach-player compatibility.

Another important construct is character building, where the coaches' perception values were significantly higher (p=0.019) than the players' perceptions, supporting the findings of Kavusannu et al. (2008). Similarly to the construct game strategy, Kavusannu et al. (2008) found that the majority (54%) of the coaches and players' perceptions were similar. Pro-social behaviours such as respect for others, good sportsmanship and fair play (Boardley et al., 2008) together with self-efficacy are associated with perceiving the coach to be effective regarding character building.

Overall values of the coaches' perceptions compared to the overall values of their respective players' perceptions are reported in Figure 3. Worthy to note from Figure 3 is that perception inconsistencies exist between each coach and their respective players regarding total coaching effectiveness.
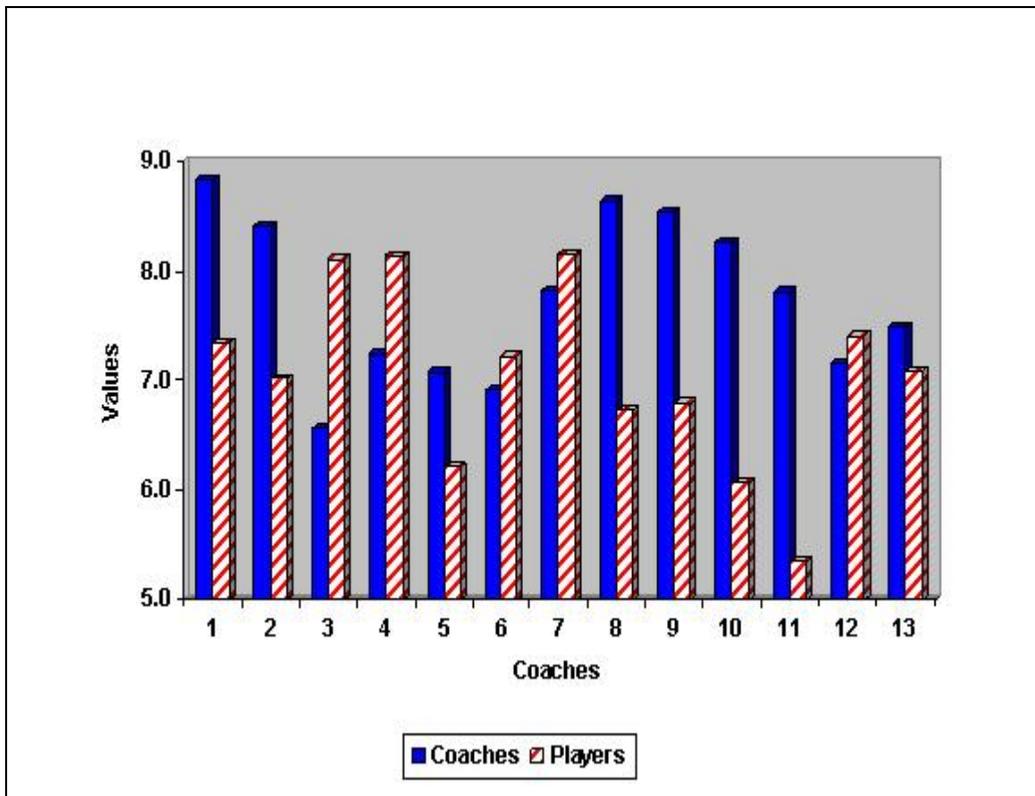
Figure 3: A comparison between the coaches' and their respective players' perceptions regarding coaching effectiveness.

It is clear that the majority (8 out of 13) of the coaches' perceptions regarding their own coaching effectiveness are higher than those of their players' perceptions. The results correspond to the study undertaken by Short and Short (2004) which found that with regard to the preponderance of the coaches, seven out of the nine, rated themselves higher compared to their players.

Furthermore in this regard Kavusannu et al. (2008) concurred that more than 50% of the coaches had higher perception values compared to perception values of their players. The results in Figure 3 clearly show that although the majority of the coaches' perceptions were higher, the margin sizes by which the differences occur are evident. For instance the margin for coach 11 is 2.4 compared to coach 12 where the margin is 0.2.

It is also interesting to note that the three highest player perception values were all for coaches with lower self perception values. The five highest perception values were all from coaches' perceptions, while the three lowest values were from players' perceptions. The reported inconsistencies signals warning lights when keeping in mind that Høigaard, Jones and Peters (2008) stated that for performance, the actual coaching behaviour and the preferred coaching behaviour should correlate. This is supported by Kenow and Williams (1999) suggesting that consistency of goals and beliefs among the coaches and their players are crucial in order to promote satisfactory interaction.

Limitations and Recommendations

It is recommended that coaching effectiveness should be monitored more regularly throughout the season using both players' and coach's perceptions. This might indicate whether performance outcomes such as win/loss record or satisfaction outcomes such as player-coach compatibility will influence the perceptions of both the coach and player and to what extent. This might shed light on whether the players and coaches perceptions are consistent throughout the season regardless of the outcomes. A limitation regarding this specific study is that all participants were male and from the same sport code, which limits the generalization of these results. We therefore suggest that further research should be done on different team sports and genders. Individual sport codes should also be investigated due to more individual time spent between coach and athlete to determine if the results will repeat themselves in a similar way.
Clarity on the effect that outcomes have on perceptions will also benefit researchers in their quest to simplify the complexity of identifying effective coaching behaviours, techniques and characteristics. Ultimately this might also aid in the training and development of coaches.

Conclusion

The results of the study support the findings of previous studies, which state that coaches' perceptions on their own coaching effectiveness are more positive than the players' perceptions regarding their respective coaches coaching effectiveness (Short & Short, 2004; Kavussanu et al., 2008).

Understanding the importance of players' input (Horn, 2002; Short & Short, 2004; Myers et al., 2006; Kavussanu et al., 2008) it is therefore concluded that when coaching effectiveness is measured, the perception of the player is a necessity. Understanding that both the coach and player form part of the relationship, the coaches' perception should not be ignored.

Acknowledgement

References

Baker, J., Yardley, J. & Côté, J. (2003). Coach behaviors and athlete satisfaction in team and individual sports. *International Journal of Sport Psychology, 34*, 226-239.

Blunch, N.J. (2008). *Introduction to Structural Equation Modelling Using SPSS and AMOS*. London: Sage.

Boardley, I.D., Kavussanu, M. & Ring, C. (2008). Athletes' perception of coaching effectiveness and athlete-related outcomes in rugby union: An investigation based on the coaching efficacy model. *The Sport Psychologist, 22*, 269-287.

Broodryk, R. & Van den Berg, P.H. (2011). High school rugby players' perception of coaching effectiveness. *US-China Education Review*, *7,* 1009-1014.

Campbell, T. & Sullivan, P. (2005). The effect of a standardized coaching education program on the efficacy of novice coaches. *Gender and Coaching Education, 11*(1), 38-45.

Chu, R.D. & Tingzon, C.J. (2009). The relationship of coaching competency on the athlete's self efficacy and hope. *The International Journal of Research and Review, 1*, 84-99.

Cortina, J.M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, *78*(1), 98-104.

Danish, S.J., Petitpas, A.J. & Bruce, D.H. (2008). Sport as context for developing competence. *In T.S.* Horn (Ed.), *Advances in Sport Psychology* (pp. 412-422). Champaign, IL: Human Kinetics.

Feltz, D.L., Chase, M.A., Moritz, S.E. & Sullivan, P.J. (1999). A conceptual model of coaching efficacy: preliminary investigation and instrument development. *The Journal of Education Psychology, 91*(4), 765-776.

Feltz, D.L., Hepler, T.J. & Roman, N. (2009). Coaching efficacy and volunteer youth sport coaches. *The Sport Psychologist, 23*(1)*,* 24-41.

Fung, L. (2003). Coaching efficacy as indicators of coach education program needs. *Athletic Insight: The Online Journal of Sport Psychology*, *5*(1), 12-18.

Gould, D., Chung, Y., Smith, P. & White, J. (2006). Future directions in coaching life skills: Understanding high school coaches' views and needs. *Athletic Insight, 8*(3),28-38.

Hancock, G.R., & Mueller, R.O. (2010). *The Reviewer's Guide to Quantitative Methods in the Social Sciences*. New York, NY: Routledge.

Høigaard, R., Jones, G.W. & Peters, D.M. (2008). Preferred coach leadership behaviour in elite soccer in relation to success and failure. *International Journal of Sport Science & Coaching, 3*(2), 241-250.

Horn, T.S. (2002). Coaching effectiveness in the sports domain. In T.S. Horn (Ed.), *Advances in Sport Psychology* (pp. 309-354). Champaign, IL: Human Kinetics Publishers.

IBM Corp. Released (2012). *IBM SPSS Statistics for Windows, Version 21.0.* Armonk, NY: IBM Corp.

Kavussanu, M., Boardley, I.D., Jutkiewicz, N., Vincent, S. & Ring, C. (2008). Coaching efficacy and coaching effectiveness: Examining their predictors and comparing coaches' and athletes' reports. *The Sport Psychologist, 22*(4), 383-404.

Kenow, J. & Williams, J.M. (1999). Coach-athlete compatibility and athletes' perception of coaching behaviors. *Journal of Sport Behavior, 22*, 251-259.

Kent, A. & Sullivan, P.J. (2003). Coaching efficacy as a predictor of university coaches' commitment. *International Sports Journal, 15*(1), 78-87.

Lyle, J. (2002). Effective coaching and the effective coach. In J. Lyle (Ed.)*, Sports Coaching Concepts* (pp. 251-272). London: Routledge.

Malete, L. & Sullivan, P. (2009). Sources of coaching efficacy in coaches in Botswana. *International Journal of Coaching Science, 3*(1), 17-27.

Mallet, C. & Côté, J. (2006). Beyond winning and losing: Guidelines for evaluating high performance coaches. *The Sport Psychologist, 20*(2), 213-221.

Mueller, R.O. (1996). *Basic Principles of Structural Equation Modeling: An Introduction to LISREL and EQS.* New York, NY: Springer.

Myers, N.D., Vargas-Tonsing, T.M. & Feltz, D.L. (2005). Coaching efficacy in intercollegiate coaches: Sources, coaching behavior, and team variables. *Psychology of Sport and Exercise, 6*(1), 129-143.

Myers, N.D., Feltz, D.L., Maier, K.S., Wolfe, E.W. & Reckase, M.D. (2006). Athletes' evaluations of their head coaches' coaching competency. *Research Quarterly for Exercise and Sport*, 77(1), 451-563.

Short, S.E. & Short, M.W. (2004). Coaches assessment of their coaching efficacy compared to athletes' perceptions. *Perceptual and Motor Skills, 99*(2), 729-736.

Vargas-Tonsing, T.M., Myers, N.D. & Feltz, D.L. (2004). Coaches' and athletes' perceptions on efficacy-enhancing techniques. *The Sport Psychologist, 18*(4), 397-414.

Vargas-Tonsing, T.M., Warners, A.L. & Feltz, D.L. (2003). The predictability of coaching efficacy on team efficacy and player efficacy in volleyball. *Journal of Sport Behavior,* 26(4), 396-407.

Vella, S.A., Oades, L.G. & Crowe, T.P. (2010). The application of coach leadership models to coaching practice: Current state and future directions. *International Journal of Sport Science and Coaching*, 5(3), 425-434.