

Coaching effectiveness and coach–athlete relationship model offers possibilities solution for competitive anxiety of young athletes

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ABSTRACT **Background:** Coaching effectiveness leads to successful athletes, including athlete’s development and performance, positive psychological progress and athlete outcomes. The coach–athlete relationship referred to all the conditions where the feelings, thoughts and behaviours of coach and athlete are mutually and casually related to each other. While, anxiety is an experience of an unpleasant athlete’s psychological and physiological feeling. However, the existing literature on the influence of coaching effectiveness and the coach–athlete relationship does not investigate specifically competitive anxiety.

Aims and Objectives: This current study aims to investigated athletes’ perception of coaching effectiveness, coach–athletes’ relationship and competitive anxiety experience of the athletes.

Methods: One hundred and fifty-two ($n = 152$) athletes from various team sports completed a questionnaire pack assessing the study variables. The coaching effectiveness scale, coach–athlete relationship questionnaire and competitive state anxiety inventory-2 were used as an instrument for this study.

Results: Results revealed that there were significant correlations between all the factors of coaching effectiveness and all the factors of the coach–athlete relationship. However, the anxiety assessment indicated a positive, negative significant correlation with the factors of coaching effectiveness and factors of the coach–athlete relationship. Further, there were no significant differences among all the factors of coaching effectiveness between genders except ‘technique effectiveness’. Next, there were no significant differences in the coach–athlete relationship between genders except for ‘commitment’. However, results revealed that there were significant differences in anxiety assessment except ‘cognitive anxiety’ between genders.

Conclusion: The competitive anxiety experience of athletes the performance of the athletes is based on how effective their coaches to influence the athletes and how they work together. Thus, do coaching effectiveness and coach–athlete relationship stand out as the fundamental factors in issues of athlete’s anxiety? It might be yes as the effectiveness of the coach and relationship with the athletes is the main causes that determine the enthusiasm of a team and the athlete’s confidence.

Key Words: Coach–athlete relationship, coaching effectiveness, competitive state anxiety inventory–2, team sports, youth

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INTRODUCTION

In sports, coaches were influential figures and engage in a wide range of roles, being accountable for several consequences applicable to athlete development and overall performance (Kassim and Boardley 2018). Effective coaches may be required to occupy many roles within the lives of their athletes including behavioural outcomes, leadership and their relationship with athletes. Coaching effectiveness also referred to as coaching that leads to successful athletes, including individual player development and performance, or positive psychological progress or athlete outcomes (Magle 2010). Coaching effectiveness was proposed to be multidimensional, consisting of motivation, game strategy, technique and character-building (Kassim and Boardley 2018). Motivation effectiveness demonstrated as the coach's ability to develop the psychological skills and mental state of the athletes. The game strategy was an ability to lead and coaching athletes during competition to a success. Technique relates to the instructional and diagnostic capacities of the coaches. Next, character building referred to the understanding of the ability to influence the personal development of athletes and positive attitudes towards sport.

The coach-athlete relationship was composed of three dimensions that are appropriate variables representing the athlete's connection or relation (closeness, commitment and complementarity). Closeness represented the feeling of the athletes about their coach cared for, liked, valued and trusted (Jowett 2017; Nicholls and Perry 2016; Vieira et al. 2015). Closeness represented the feeling of the athletes about their coach cared for, liked, valued and trusted (Kassim and Boardley 2018). Commitment referred to the interpersonal thoughts of coaches and athletes, despite ups and downs, still maintain a close relationship over time (Jowett 2017). Complementarity measured co-operation, sensitivity and behavioural association between coaches and athletes (Vieira et al. 2015). Thus, there were two sets of complementarity behaviours indicating matching and mutual coaches and athletes on a pitch which are corresponding and reciprocal.

Besides, anxiety was common experienced unpleasant emotion in sport and performance settings. Anxiety consisted of cognitive and somatic elements, which can either be a trait or a disorder (Zhang et al. 2018). Anxiety assessment defined as the instrument developed for testing panic disorders includes two groups which are generic tools and specific tools. Both platforms well-validated which can be used for screening purposes and outcome assessments. Martens et al. (1990a) developed the multidimensional theory of competitive state anxiety as a means of explaining the separate modes of impact on sports success of somatic anxiety, cognitive anxiety and self-confidence. One of the psychological states linked with coaches' self-confidence (Feltz et al. 1999).

According to Skinner (2013), that sport-confidence could be associated with qualities such as mental toughness, poise, grit, belief, courage and heart. Sport confidence represented

as someone's belief or trust in self to carry out the tasks or instruction given by coaches to compete and succeed in sports. Self-confidence has been considered as psychological attributes and critical mental skill that influence the performance of athletes by sports practitioners, theorists and researchers. Besides, self-confidence was related to past experiences (Comeig et al. 2016), motivational structure (Magyar and Feltz, 2003), interaction between peers (Hwang et al. 2017), locus of control, optimism and well-being (Sar and Işıklar 2012) and self-efficacy (Bozkurt et al. 2012). The self-confidence of athletes improved when they achieve their goals, participate in active cognition and action self-regulation and practice and perform in a competitive environment that is inclusive, stimulating, comfortable and inspiring (Gencer and Öztürk 2018).

Literature had located that athlete who perceived their coaches to be 'just right' in confidence had more self-belief of their group. Moreover, athletes on prevailing teams had the extra self-belief of their coach and their team's abilities than in dropping teams (Atkinson 2016). Moreover, the coach-athletes relationship and coach effectiveness are viewed as a context within which coaches operated to largely bring about changes in the athlete's performance and well-being and quality of the relationship between coaches and athletes. In addition, the quality of the relationship coaches and athletes developed and maintained over the course of their sporting partnership alongside coaches and athletes' knowledge and outcomes, form a system that was capable of defined coaching effectiveness and success. Relationship among coach-athletes also become the causes or problems (nervous, unprepared physical and mental) and confidence of athletes. Nevertheless, according to Hampson and Jowett (2012), the relationship between coach and athlete is not stated in the proposed model of collective effects within athletes in a sports team. Besides, sports psychologists failed to determine the relationship between anxiety and its effect on sports performance since there is a lack of research and limited information on those variables (Parnabas et al. 2015).

Based on the coaching effectiveness model has identified the relationship between evaluation of coaches by athletes and athlete performance outcomes (Boardley et al. 2015). According to Côté and Gilbert (2009), confidence can also be influenced by the effectiveness of a coach. The understanding of the motivation effectiveness of their coach by athletes can be a significant antecedent of the sport confidence of athletes, as motivation effectiveness represents the ability of coaches to improve athlete's psychological abilities and states (Kassim and Boardley 2018). Boardley et al. (2015) also had identified consistent positive connections between golfers 'perceptions of their coach's motivational effectiveness (i.e., players' confidence in the ability of their coach to affect their players' psychological skills and state; Feltz et al. 2008) and players' role of self-efficacy through three studies. Although informative, collectively the above studies most effective considered variables relevant to confidence and character from the four athlete-degree results mentioned as effects of effective coaching (Côté and Gilbert, 2009).

Research has shown that CARs affect athletes in a variety of ways (Burns 2020). In sports, CARs are considered as important (Côté and Gilbert 2009), where it has the potential to be a major medium desired by athletes, for example, to be a skilled and successful player, fulfilled and expressed (Jowett 2005). It is supported by Jowett and Cockerill (2003) where even at the competitive elite level, CARs are an important factor contributing to the athlete's development. The best athletes in the world (who are successful in World Championships and Olympics) often admit that coaches play a significant role in the achievement of sports performance (Jowett and Shanmugam 2016). On the other hand, it is rare to hear athletes criticise a coach after winning a gold medal or breaking a record.

On the other hand, heavy playing schedules, competition for team places, the media coverage and pressure from fans as well as the pressure to win trophies all play a part in players causing high stress and anxiety levels, especially the level of somatic anxiety (Heather 2010). Somatic anxiety has caused changes in the physiological function of athletes, including intensified perspiration, trouble breathing, accelerated rhythm of heartbeat, brain wave shifts, elevated blood pressure, increase urination, stomach butterflies, reduced mouth salivation and stress in muscles. In addition, cognitive was characterised as the mental aspect which has negative perceptions of achievement or self-assessment, negative self-discussion and performance problems, the image of failure, inability to focus and distracted attention. Past research found that both male and female athletes experienced stresses that resulted in pressure to win, high anxiety, frustration issues, irritation and fear, which significantly affected their emotional or mental health (Humphrey *et al.* 2000).

To sum up, the concept of coaching effectiveness in sport has obtained appreciation in recent years and it continues to remain a successful conceptualisation to establish further in different contexts and using globally competitive methods. The outcomes of the importance of a coach-athlete relationship in coaches and players for short-and long-term functioning can be affected sport-confidence. Moreover, the study of the coach-athlete relationship has produced vital information about the quality and functions of the coach-athlete relationship regardless of its influence on the effectiveness of coaching and sport-confidence in team sports for both genders. Therefore, the main objective of this research was to investigate the four dimensions of coaching effectiveness within the team sports athletes included motivation, technique, game strategy and character-building and coach-athlete relationships whether it can moderate or eliminate the anxiety. The theoretical understanding convinced coaching effectiveness and coach-athlete relationship increased the confidence of the athletes. Thus, this study was aims to examine coaching effectiveness, coach-athlete relationship and sports anxiety which is expected to influence through confidence level of the athletes.

METHODOLOGY

For this study, the approach that we used was quantitative research to explore and investigate coach effectiveness, coach-athlete

relationship and confidence through anxiety assessment among youth athletes. This is a non-experimental research design and cross-sectional study. Specifically, this design was chosen as there is no treatment given to the participants.

Sample

A total of 152 youth athletes from ($n = 10$) team sports volunteered to serve as participants in this study. These participants were selected through a purposive sampling comprising of both male and female team sports (football, futsal, sepak takraw, rugby, handball, netball, hockey, tenpin bowling, volleyball and frisbee). They were categorised into male ($N = 76$) and female ($N = 76$) athletes. Most of the athletes had represent their sports in the level of university ($n = 105$), state ($n = 40$) and national ($n = 7$). The time athletes with current coach were from 0 to 6 months ($n = 52$), 7–12 months ($n = 27$) and more than 1 year ($n = 73$).

Instruments

- i. Coaching effectiveness was measured by using the coaching effectiveness scale (CES) (Kassim and Boardley 2018). For the study, the four subscales of coaching effectiveness in CES assessed which were motivation ($n = 6$, $\alpha = 0.80$), techniques ($n = 6$, $\alpha = 0.79$), game strategies ($n = 7$, $\alpha = 0.81$) and character-building ($n = 5$, $\alpha = 0.74$). Example items were 'Maintain confidence in his or her players' (motivation effectiveness), 'Develop players' abilities', (techniques effectiveness), 'Adjust the game strategy to meet the team's talent'. (Game strategies effectiveness) and 'Instill an attitude of good moral character' (Character-building effectiveness). Athletes were responded to using a 5-point Likert scale ranging from 1 (not at all) to 5 (all of the time)
- ii. Coach-athlete relationships were measured by using the 11-item Coach-Athlete Relationship Questionnaire (CART-Q; Jowett and Ntoumanis 2004). This questionnaire consisted of three subscales that divided the coach-athletes relationship into commitment ($n = 3$, $\alpha = 0.74$), closeness ($n = 4$, $\alpha = 0.83$) and complementarity ($n = 4$, $\alpha = 0.86$). Examples items were 'I feel committed to my coach' (Commitment), 'I respect my coach' (Closeness) and 'When I am coached by my coach, I am ready to do my best' (Complementarity). Athletes were responded using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree)
- iii. Anxiety: The 27-item from competitive state anxiety inventory-2 (CSAI-2) was developed by Martens *et al.* (1990a). CSAI-2 divided into three subscales, which are cognitive state anxiety ($\alpha = 0.82$), somatic state anxiety ($\alpha = 0.83$) and self-confidence ($\alpha = 0.86$), were used for this current study. The value of Cronbach's alpha coefficients showed the value of internal consistency between 0.70 and 0.90 which is an acceptable and good level of reliability. The four presented answers included not at all (1), sometimes (2), often (3) and very often (4).

Procedure

The items question used in this study was a dual language Malay and English. The Malay version has been verified using forward-

backward translation verified by expert language assigned. The report stated forward-backward translations were done adequately represent the construct of the original language and similar understanding as it is, the items translations also do not contain offensive or biased towards respondent, moreover, it is recommended that the translation is aware of the concepts of the questionnaire intend to measure and provided a translation that closely resembles of the original instrument. This current study had gone through the university ethics process for ethical approval. After obtaining approval, the researchers contacted the team coach and set the date and time for data collections. Data collections were strategically used online version (Google Form) to the athletes answering the questionnaire. In the information, a brief about the purpose and objective of the study and concern form volunteered or withdrawal to participate has been attached. Then, approximately 15–20 min were spent completing the questionnaire given.

Statistical analysis

All data in this study were analyzed by using the Statistical Package for the Social Science (SPSS) version 25.0 for Windows. (i) Descriptive statistics were utilized for demographic data. (ii) r-Pearson correlation was performed to examine the correlations between the study variables. (iii) The Independent sample *t*-test statistic was used to test the differences in the coaching effectiveness, coach–athletes relationship and anxiety assessment between male and female athletes (genders).

RESULTS

Bivariate correlations [Table 1] illustrated a moderate positive correlation between motivation and game strategy ($r(152) = 0.597, P = 0.00$). Next, there was significant correlation between motivation and technique, which was strong positive correlation between both factors ($r(152) = 0.727, P = 0.00$). Next, there was a strong positive correlation between motivation and character building, ($r(152) = 0.745, P = 0.00$). Further, there was significant correlation between motivation effectiveness and commitment ($r(152) = 0.261, P = 0.00$). Results also showed that there was significant relationship between motivation and closeness ($r(152) = 0.391, P = 0.00$). Next, there was the moderate positive correlation between motivation and complementarity ($r(152) = 0.430, P = 0.00$). There was weak negative correlation between motivation and somatic anxiety ($r(152) = -0.176, P = 0.03$). Then, there was no significant correlation with motivation effectiveness and cognitive anxiety ($r(152) = -0.016, P = 0.85$). Moreover, there was no significant correlation between motivation effectiveness and self-confidence ($r(152) = 0.157, P = 0.54$).

Undeniably, there was significant correlation between game strategy and technique ($r(152) = 0.719, P = 0.00$). Next, there was moderate positive correlation between game strategy and character building ($r(152) = 0.544, P = 0.00$). More, there was a weak positive correlation between game strategy and commitment ($r(152) = 0.356, P = 0.00$). Next, there was significant correlation between game strategy and closeness ($r(152) = 0.447, P = 0.00$).

Furthermore, there was significant correlation between game strategy and complementarity ($r(152) = 0.414, P = 0.00$). Besides, there was a negative significant correlation between game strategy and somatic anxiety ($r(152) = -0.246, P = 0.00$). Next, there was no significant correlation between game strategy and cognitive anxiety ($r(152) = -0.131, P = 0.11$). Next, there are significant correlation between game strategy and self-confidence which ($r(152) = 0.201^*, P = 0.01$).

An independent sample *t*-test was conducted to compare the factor of coaching effectiveness between gender [Table 2]. First, motivation effectiveness compared between male and female. Since the *P* value (0.284) obtained from Levene's test is >0.05 , therefore, it showed that equal variances assumed. There was no significant difference in motivation effectiveness scores for male, $M = 4.31$, standard deviation (SD) = 0.40 and female, $M = 4.36$, $SD = 0.50$, $t(150) = -0.73, P = 0.46$ (two-tailed). Since $P > 0.05$, therefore, there was no significant difference in mean motivation effectiveness scores between males and female athletes.

Second, an independent sample *t*-test was conducted to compare the factor of game strategy effectiveness score between male and female. Since the *P* value (0.085) obtained from Levene's test is greater than 0.05, therefore, it showed that equal variances assumed. There was no significant difference in-game strategy effectiveness scores for male, $M = 4.17$, $SD = 0.51$ and female, $M = 4.26$, $SD = 0.60$, $t(150) = -1.03, P = 0.30$ (two-tailed). Since $P > 0.05$, therefore, there was no significant difference in mean game strategy effectiveness scores between males and female athletes.

Next, an independent sample *t*-test was conducted to compare the factor of technique effectiveness score between male and female. Since the *P* value (0.362) obtained from Levene's test is >0.05 , therefore, it showed that equal variances were assumed. There was a significant difference in technique effectiveness scores for male, $M = 4.17$, $SD = 0.47$ and female, $M = 4.41$, $SD = 0.47$, $t(150) = -3.16, P = 0.002$ (two-tailed). Since the $P < 0.05$, therefore, there was a significant difference in mean technique effectiveness scores between males and female athletes.

Finally, an independent sample *t*-test compared the factor of character-building effectiveness score between male and female. Since the *P* value (0.118) obtained from Levene's test is >0.05 , therefore, it showed that equal variances assumed. There was no significant difference in character building effectiveness scores for male, $M = 4.28$, $SD = 0.47$ and female, $M = 4.39$, $SD = 0.53$, $t(150) = -1.29, P = 0.199$ (two-tailed). Since $P > 0.05$, therefore, there was no significant difference in mean character-building effectiveness scores between male and female athletes.

Table 3 showed an independent sample *t*-test for the coach–athlete relationship between the gender of the team sport. Results showed that there was a significant difference in mean commitment scores between male and female athletes. Since the *P* value (0.471) obtained from Levene's test is greater than 0.05, therefore, it

Table 1: Descriptive statistic, alpha coefficients and correlations among variables (coaching effectiveness, coach-athlete relationship and anxiety experience)

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10
Motivation	4.33	0.46	<i>0.80</i>									
Game strategy	4.22	0.48	0.59**	<i>0.81</i>								
Technique	4.29	0.48	0.72**	0.71**	<i>0.79</i>							
Character building	4.34	0.50	0.74**	0.54**	0.66**	<i>0.74</i>						
Commitment	5.89	0.66	0.26**	0.35**	0.37**	0.27**	<i>0.74</i>					
Closeness	6.17	0.66	0.39**	0.44**	0.50**	0.37**	0.59**	<i>0.83</i>				
Complementarity	6.11	0.64	0.43**	0.41**	0.44**	0.39**	0.60**	0.75**	<i>0.86</i>			
Somatic	2.89	0.50	-0.17*	-0.24**	-0.11	-0.23**	-0.08	-0.14	-0.16*	<i>0.82</i>		
Cognitive	2.41	0.54	-0.01	-0.13	-0.02	-0.09	-0.04	-0.03	-0.06	0.66**	<i>0.83</i>	
Self confidence	2.95	0.48	0.15	0.20*	0.11	0.19*	0.17*	0.18*	0.29**	-0.39**	-0.22**	<i>0.86</i>

*Correlation is significant at the 0.05 level, **Correlation is significant at the 0.01 level (two-tailed), $n=152$, alpha coefficients (α) are presented on the diagonal (in italic). SD: Standard deviation

Table 2: Independent sample t-test between male and female athletes for coaching effectiveness dimensions of team sports (n=152)

	Levene's test for equality of variances		T-test for equality of means			
	F	Significant	T	df	Significant (two-tailed)	Mean difference
Motivation	1.156	0.284	-0.737	150	0.462	-0.05451
Game strategy	3.010	0.085	-0.737	142.381	0.462	-0.05451
			-1.032	150	0.304	-0.08114
Technique	0.835	0.362	-1.032	146.028	0.304	-0.08114
			-3.164	150	0.002**	-0.24123
Character building	2.479	0.118	-3.164	149.934	0.002**	-0.24123
			-1.290	150	0.199	-0.10526
			-1.290	148.245	0.199	-0.10526

** $P < 0.05$ significant (two-tailed)

Table 3: Independent sample t-test between male and female athletes for coach-athletes relationship of team sports (n=152)

	Levene's test for equality of variances		T-test for equality of means			
	F	Significant	T	df	Significant (two-tailed)	Mean difference
Commitment	0.521	0.471	-2.481	150	0.014**	-0.26316
			-2.481	149.049	0.014**	-0.26316
Closeness	0.105	0.746	-0.765	150	0.446	-0.08224
			-0.765	149.642	0.446	-0.08224
Complementarity	2.048	0.155	-1.200	150	0.232	-0.12500
			-1.200	145.945	0.232	-0.12500

** $P < 0.05$ significant (two-tailed)

showed that equal variances assumed. There was a significant difference in commitment scores for male, $M = 5.76$, $SD = 0.68$ and female, $M = 6.03$, $SD = 0.63$, $t(150) = -2.48$, $P = 0.014$ (two-tailed) since $P < 0.05$.

Second, an independent sample t -test was conducted to compare the factor of closeness score between male and female of the team sports. Since the P value (0.746) obtained from Levene's test is >0.05 , therefore, it showed that equal variances assumed. There was no significant difference in closeness scores for male, $M = 6.13$, $SD = 0.69$ and female, $M = 6.21$, $SD = 0.65$, $t(150) = -0.77$, $P = 0.446$ (two-tailed). Since $P > 0.05$, therefore, there was no significant difference in closeness scores between male and female athletes.

Next, an independent sample t -test was conducted to compare the factor of commitment score between male and female team

sports. Since the P value (2.048) obtained from Levene's test is >0.05 , therefore, it showed that equal variances assumed. There was no significant difference in complementarity scores for male, $M = 6.05$, $SD = 0.69$ and female, $M = 6.17$, $SD = 0.59$, $t(150) = -1.20$, $P = 0.232$ (two-tailed). Since $P > 0.05$, therefore, there was no significant difference in complementarity scores between male and female athletes.

Table 4 showed an independent sample t -test for anxiety experiences assessment between gender of the team sport. Results revealed that there was no significant difference in cognitive anxiety between male and female athletes. Since the P value (0.736) obtained from Levene's test is >0.05 , therefore, it showed that equal variances assumed. There was no significant difference in cognitive anxiety scores for male, $M = 2.85$, $SD = 0.48$ and female, $M = 2.93$, $SD = 0.51$, $t(150) = -1.054$, $P = 0.294$ (two-tailed) since $P > 0.05$.

Table 4: Independent sample t-test of genders for anxiety experience of team sports (n=152)

	Levene's test for equality of variances		T-test for equality of means			
	F	Significant	T	df	Significant (two-tailed)	Mean difference
Cognitive	0.114	0.736	-1.054	150	0.294	-0.08480
			-1.054	149.433	0.294	-0.08480
Somatic	2.969	0.087	-2.635	150	0.009**	-0.22807
			-2.635	147.342	0.009**	-0.22807
Self-confidence	0.019	0.891	2.630	150	0.009**	0.20175
			2.630	149.271	0.009**	0.20175

**P<0.05 significant (two-tailed)

Furthermore, the data showed the mean and SD for the second factors of anxiety (somatic) experience scores between male and female athletes. Since the *P* value (0.087) obtained from Levene's test is >0.05, therefore, it showed that equal variances assumed. There was a significant difference in somatic anxiety scores for male, *M* = 2.30, *SD* = 0.50 and female, *M* = 2.52, *SD* = 0.57, *t* (150) = -2.635, *P* = 0.009 (two-tailed). Since the *P* < 0.05, therefore, there was a significant difference in somatic anxiety experience between male and female athletes.

Finally, the results compare the self-confidence assessment score between male and female. Since the *P* value (0.891) obtained from Levene's test is >0.05, therefore, it showed that equal variances assumed. There was a significant difference in self-confidence scores for male, *M* = 3.05, *SD* = 0.49 and female, *M* = 2.85, *SD* = 0.46, *t* (150) = 2.630, *P* = 0.009 (two-tailed). Since the *P* < 0.05, therefore, there was a significant difference in mean self-confidence scores between male and female athletes.

DISCUSSION

First, there were significant relationships between the component of coaching effectiveness, the component of the coach-athlete relationship, and anxiety experiences among team sports of youth athletes. Based on this study, results revealed that there was a significant relationship between all components of coaching effectiveness (motivation, game strategy, technique and character building) and all components of the coach-athlete relationship (commitment, closeness and complementarity) to each other. The result was supported with a past study by Magle (2010) that mentioned a correlation between the coach efficacy scales and the CART-Q sub-scales revealed that contribution to explaining the effectiveness of coaching. The coaches may exactly contribute or give effort which practice motivating their athletes, explain how the game strategy should be applied and recognise opponent strength and weaknesses. In addition, show and practice correct technique in sports and created something good being an athlete, directly influence athletes' which committing those particular coaches, especially on the training session, also, the athletes getting closer to the coaches. Furthermore, complementarity could increase when the coaches rewarding or praising the athletes, especially when the athletes had done good work or accomplished goal in the training or competition. In another word, the relationship between CES and CARs was instrumental because it could activate important coaching processes, such as

influencing, supporting, helping, guiding, instructing as well as listening, willing, following, and accepting for coaches and athletes to develop, grow, achieve and succeed.

Besides, the result showed that there was a significant relationship between all components of CES include motivation, game strategy and character building except technique with components of anxiety experience (somatic anxiety). The feedback, encouragement or correction related to the sports skills lead to decreasing, reducing or minimising confidence for some of the athletes related to somatic. Past research had mentioned somatic anxiety also influences athlete's sympathetic nervous system of the athletes as they stimulated by the fear perception in the cerebral cortex, prompting an immediate stress response. The coaches may help athletes reduce anxiety problem by apply or practicing good coaching effectiveness.

Moreover, there was a significant relationship between two components of CES which are game strategy and character building with self-confidence. These two components may influence or enhanced confidence within athletes. The coaches making some research on the strengths and weaknesses of the opponent and informed the team before the game. From that particular action, the athletes mostly feel confident before they enter the court or field. Whilst, the coach builds up some good character in athletes for example being good, playing fairly and respecting others (opponent), will lead to the self-confidence of the athletes. The study by Jannat and Kee (2014) also found confidence in coaches' ability to lead them through practice and competition was one of the factors that could motivate the athletes to perform at their optimum level. Under the guidance of successful coaches, athletes were able to learn and understand the game strategy applied in the current situation. Specifically, in competition, coach's leadership qualities gain confidence in athletes' physical and mental abilities and drive to work hard accomplishing goals.

Furthermore, in the results of the correlation between components of CARs 'complementarity' and a component of anxiety 'somatic' showed negative and weak correlations. Overall, the data showed that there was a weak negative correlation between them. It means the higher level of complementarity the lower the anxiety level experienced by the athletes. The athletes feel happy with their coaches' approach during the training session together may reduce somatic problem within athletes individually. The approach of the

coaches may help athletes to keep calm directly reduce somatic issues. Even though complementarity and somatic interpreted and showed a negative correlation between the coaches and athletes, one of the CSAI-2 components which is self-confidence are mutually correlated to all of the CAR components. There was a significant relationship, but the result showed a weak positive correlation. This may be because in having a good relationship between them, athletes may become closer, feel appreciated and easy to commit and communicate to their coaches. The athletes also feel more confident with their performance and felt secure with their coaches.

For differences, there were significant differences in the component of coaching effectiveness and coach-athlete relationship and anxiety between male and female team sports athletes. First, (CES) based on the result, there were significant differences in technique effectiveness between genders. The result revealed that female athletes were more on technique than male athletes. This may be because female athletes may be felt ease to duplicate or practice and follow their coaches display and instructions on the training session. However, the male athletes might comfortable to practice and apply the common things as their more confident in their techniques. At this level of evaluations, male athletes may think that they be able to practicing the skill independence or less supervision from the coaches. This study was in contrast with Magle (2010), which found that there were no significant differences between genders in the component of CES which is technique.

Second, for coach-athlete relationship, factors commitment showed significant differences between genders. Previous study has mentioned that coaches may not treat all athletes in much the same way as they responded to each athlete's perceptive and real motivation and behaviour and therefore, individual variations significantly affected coaches' attitudes or decisions (Mageau and Vallerand 2003). The current finding showed that female athletes were likely to giving commitment than male athletes with their coaches on training session. It may be because female athletes' character is likely to feel close and attached which give them feel too committed to their coach on the field. Another reason seems to explain that athletes may be easy to contribute if the athletes have mutual gender with the coaches. Other factors may be because of the period of engagement of athletes with current coaches and the types of sports they played. The longer the period of engagement with current coaches and sports, the lot commitment the athletes could give to the coaches while training and competitions. The past study conducted by Jowett and Nezlek (2012) indicated that the longer the coaching relationship with athletes continues, the higher the level of performance and the mutual outcomes for gender dyads are likely to feel more satisfied because they have better and stronger coach-athlete relationships.

Finally, differences in anxiety experience between gender showed that somatic and self-confidence were significant differences between male and female youth athletes. For somatic anxiety experience, the result can be interpreted as

female athletes always experience have tense in their bodies to compare with male athletes. They may have high somatic anxiety problems which feel fear and uncomfortable that may cause their body to tense and shaking before the competition. Therefore, the level of somatic anxiety of female athletes was high compared to male athletes. Besides, there were significant differences in self-confidence between male and female athletes. Mean showed that male athletes experienced for self-confidence than female athletes. Maybe the coaches in male team sports were concern more about making their athletes feel motivated before the competition. There were differences of coaches in way of delivering the message or objectives, motivating the player and convinced them to practice correct skills and techniques during training. This may support Kassim and Boardley (2018), who mentioned that motivation is able to influence an athlete's sports confidence and represents the ability of the coaches to enhance athlete's psychological abilities and states. Moreover, both male and female coaches may have the different skill to communicate with their athletes. These findings also supported by Ağaoğlu (2016) who conducted a study to measure pre-competition anxieties and to assess the pre-competition concerns of judo athletes as the finding revealed that there was a difference in the quantitative values of somatic anxiety, cognitive anxiety and self-confidence between genders.

CONCLUSION

The athletes' perception of their coach's effectiveness, coach-athlete relationship and anxiety experience is important for sports coaches to enhance optimal and better performance as well as winning in the competition. Thus, this study may enhance the positive impacts or implication such as improve coaching skills, provide exact coaches line-up in team sports and correct action of interaction with athletes. This will increase the development of sports coaching generally. In term of genders, this study produced a detailed understanding of the coaching effectiveness, coach-athlete relationship and anxiety experience in team sports of youth athletes. There are differences in all techniques, commitment, somatic anxiety and self-confidence between genders. Throughout the end, coaches and athletes share power through their mutual correlation. However, there can be no effective, productive and purposeful coaching without any quality coach-athlete relationship effectiveness. This study also contributed to the knowledge of the coaching effectiveness in a sport setting focused on the sports coaching field. The finding of the study helped coaches and athletes to understand the function of coaching effectiveness, understanding anxiety and improving or affecting coach-athlete interaction. Next, this study provided ideas for sports psychologists and coaches on how to improve athletes' mental state that could affect their sports performance to become more successful. This research also came together with theoretical explanations and attempts to provide conceptual and operational clarity. It provided the impetus for more theoretical and empirical research. Finally, all the outcomes can be proved that coaching effectiveness can contribute to the improvement of an athlete's performance.

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Conflicts of interest

There are no conflicts of interest.

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