



Preferred Leadership Styles of Physical Education Teachers and Relationship with Athletes' Satisfaction

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Although the leadership styles of physical education teachers are important for increasing athlete satisfaction, choosing the most appropriate leadership styles is difficult for physical education teachers owing to the numerous leadership styles suggested by scholars and researchers. Therefore, this study attempts to answer the following questions: 1) What are the leadership styles of physical education teachers preferred by athletes? 2) Can the leadership styles of physical education teachers predict athlete satisfaction? A total of 136 athletes from 12 schools in Iraq are selected randomly, and the Revised Leadership Scale for Sport and Athlete Satisfaction Questionnaire are used to measure the leadership styles of physical education teachers and athlete satisfaction, respectively. The data are analysed using SmartPLS 3.0, and results show that the democratic behaviour and training and instruction behaviour leadership styles positively affect athlete satisfaction, whereas the autocratic behaviour leadership style negatively affects athlete satisfaction. This study contributes to the expansion of theories on the leadership styles of physical education teachers in the context of the education sector in Iraq. To increase athlete satisfaction, this study recommends physical education teachers to employ the training and instruction behaviour and democratic behaviour leadership styles and refrain from using the autocratic behaviour leadership style.

Keywords: athletes' satisfaction, autocratic behaviour, democratic behaviour, physical education teachers, preferred leadership styles, training and instruction

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INTRODUCTION

Leadership may be one of the oldest fields of study in the world and has been examined across societies, nations and continents since the time of Plato (Bass & Bass, 2008), which illustrates people's enjoyment of discussions on the topic. Discussions across continents and societies show that leadership is an important topic, especially when associated with organisational effectiveness (Bass & Bass, 2008; Yukl & Gardner, 2020). In relation to the importance of leadership, Lock (1991, p. 1) mentioned that "there probably has never been a society, country, or organization that did not have a leader; if there has, it probably did not survive for long". Thus, it can be concluded that leadership is crucial to the survival of organisations and societies, including sports teams.

Literature Review

Leadership Theories

Researchers and scholars provided numerous definitions for leadership. Bass and Bass (2008) believed that the scholars attempting to define leadership are nearly as many as those trying to examine it. Although defining leadership is difficult, the definition of leadership given by Chelladurai and Saleh (1980) is used in this study as the operational definition. Chelladurai and Saleh (1980) defined leadership in sports as influence on team members to carry out tasks to achieve goals. This definition is appropriate for sports teams, as they can also be considered as organisations (Chelladurai & Saleh, 1980; Chelladurai, 2012).

Since the 1940s, numerous leadership theories have been developed by scholars. The evolution of leadership theories began with great man theory, which proposes that leadership is hereditary (Yukl, 2006; Bass & Bass, 2008; Yukl, 2013; Northouse, 2019). However, this theory failed to convince the public owing to inconsistent research findings (Yukl, 2006; Bass & Bass, 2008; Yukl, 2013; Northouse, 2019). The failure of great man theory led researchers to turn to trait theory, which assumes that an individual's traits can determine his/her effectiveness as a leader (Yukl, 2006; Bass & Bass, 2008; Northouse, 2019; Yukl, 2013). However, similar to great man theory, findings showed that a person's gender, age and body size are not indicative of his/her intelligence (Yukl, 2006; Bass & Bass, 2008; Northouse, 2019; Yukl, 2013). The inconsistency in the findings on traits led researchers to suggest that a leader's effectiveness is due to his/her behaviour. This theory proposes that human behaviour distinguishes effective leaders from ineffective leaders (Yukl, 2006; Bass & Bass, 2008; Northouse, 2019; Yukl, 2013).

Several studies that attempted to test this proposition found that a leader's behaviour can help distinguish effective organisations from ineffective organisations (Hoy & Miskel, 1991; Hoy et al., 2013). Since the beginning of the 1950s, large-scale studies from Ohio State University (Halpin, 1966), University of Michigan (Likert, 1961) and Harvard University (Bales, 1954) in the United States have produced numerous leadership theories, such as autocratic, democratic and laissez-faire leadership, considering and initiating structure, task orientation and human relation orientation (Bass & Bass, 2008;

Yukl & Gardner, 2020). In general, behavioural leadership theories claim that a leader's behaviour can determine the success or effectiveness of an organisation (Bass & Bass, 2008; Hoy & Miskel, 1991; Hoy et al., 2013; Yukl, 2006; Yukl & Gardner, 2020). With the emergence of various leadership behaviour theories, numerous questions were raised, such as which leadership styles are the most effective for physical education teachers.

Leadership Styles for Sports

Leaders are influential individuals who can determine the success or failure of an organisation (Bass & Bass, 2008). This idea can also be applied to sports organisations, specifically, sports teams (Chelladurai & Saleh, 1980; Chelladurai, 2012). Jowett and Arthur (2019) claimed that coaches' leadership behaviours can maximise athletes' performance and satisfaction. Arthur and Bastardoz (2020) found that coaches play a crucial role in developing and preparing athletes. Berry and Fowler (2021) revealed that coaches' leadership behaviours are important to a wide range of sports outcomes. Moreover, Fletcher and Roberts (2013) argued that a coach, as the team leader, is responsible for the success of the team he/she is leading. Thus, teams choose coaches as team leaders based on their skills and leadership. However, despite such practices, some coaches fail.

Chelladurai (2012) cautioned that coaches of sports organisations or teams are not only coaches and team managers but also team leaders. Valcour (2014) asserted that an individual cannot become an effective manager or leader if he/she is not an effective coach. This concept implies that an effective physical education teacher should also be an effective leader, or vice versa. To become an effective leader, a physical education teacher must know what drives each athlete in the team. To understand each athlete's drive, a physical education teacher must 1) listen deeply; 2) ask, not tell; 3) create and sustain a developmental alliance; 4) focus on moving forward positively; and 5) have accountability (Valcour, 2014).

Based on the aforementioned leadership theories, Chelladurai and Saleh (1980) developed a theory on leadership styles for sports. Chelladurai and Saleh (1980) defined leadership for sports as influence on team members to carry out tasks to achieve goals. However, sports leadership differs slightly from organisational leadership, because in the former, a leader influences athletes through not only communication but also his/her coaching skills. Therefore, to carry out the functions of a sports leader, a coach must have a specific set of skills, such as team development abilities, to become highly skilled and mentally and physically strong and plan strategies for major competitions (Fletcher & Roberts, 2013). In addition, coaches must be able to understand various leadership styles to adapt to the diversity of players' characters (Arthur & Bastardoz, 2020; Karim & Ismail, 2019).

Finally, Chelladurai and Saleh (1980) developed the Leadership Scale for Sport (LSS), which consists of five leadership behaviours, namely, 1) training and instruction, 2) democratic behaviour, 3) autocratic behaviour, 4) social support and 5) positive feedback. The first type of behaviour refers to the direct task of coaching to improve

athletes' performance. The second type of behaviour involves allowing athletes to participate in decision making related to the development of group goals, strategies and game tactics. The third type, namely, autocratic behaviour, refers to coaches determining goals, strategies and tactics; giving instructions; and expecting athletes to adhere to them strictly. The fourth type, that is, social support, refers to coaches' behaviour of paying attention to athletes' welfare and adopting a friendly manner towards players. Finally, the fifth type, which is positive feedback, refers to coaches' behaviour of giving positive feedback to players when they succeed in doing a task well (Chelladurai & Saleh, 1980). Subsequently, Zhang et al. (1997) revised the LSS. The revised LSS (RLSS) ultimately included six dimensions, namely, 1) training and instruction, 2) democratic behaviour, 3) social behaviour, 4) positive feedback, 5) situational consideration and 6) autocratic behaviour.

In several studies that tested the theory, Chelladurai (1984) found that coaches' preferred leadership styles are related to athletes' optimal performance and satisfaction, which in turn can lead to happiness in the sport. Prophet et al. (2017) emphasised that a coach is important to athletes' development and overall performance. Moreover, Chelladurai (2012) claimed that coaches tremendously impact athletes' psychological and physical welfare. Meanwhile, Yemiru (2020) observed the positive impact of the training and instruction leadership behaviour on athletes' performance. Ismail et al. (2020) and Umayo (2021) revealed that coaches' leadership styles have a relationship with athletes' performance. Previous studies also found that coaches' leadership styles have an impact on athletes' motivation (Adzhar et al., 2019; Ronald & Slawomir, 2018) and team cohesion (Nascimento-Júnior et al., 2018).

Athletes' Satisfaction

Athletes' satisfaction refers to the extent to which athletes are satisfied with the leadership styles of their coaches (Riemer & Chelladurai, 1998). Athletes' satisfaction is important, as it can affect their motivation and thus achievement in competitions. Players with high levels of satisfaction typically display seriousness in either training or competitions (Riemer & Chelladurai, 1998). Lyubomirsky et al. (2005) argued that level of happiness can predict positive outcomes. De Francisco et al. (2018) revealed that athletes' satisfaction can increase their motivation and engagement in the sport. Chelladurai (1984) opined that athletes' satisfaction is accepted as an imperative component of affective success and productivity. Thus, according to numerous studies, to enhance players' performance, coaches must first and foremost increase the players' level of satisfaction using appropriate leadership styles (Chelladurai & Riemer, 1998; Dunn et al., 2010; Fouraki et al., 2020; Harenberg et al., 2016; Karim & Ismail, 2019; Karreman et al., 2009; Turner, 2018).

Relationship between Physical Education Teachers' Leadership Styles and Athletes' Satisfaction

Although studies claimed that coaches' leadership styles can affect athletes' satisfaction, the most dominant leadership styles affecting athletes' satisfaction have yet to be identified. In a study on football players in Malaysia, Yusoff and Muhamad (2018)

found that the players are most interested in the democratic behaviour leadership approach and favour the autocratic behaviour leadership approach the least. Meanwhile, Chee et al. (2017) determined that athletes mainly prefer the training and instruction leadership behaviour, followed by the democratic, positive feedback and social support behaviours. In addition, autocratic behaviour was the least preferred. Furthermore, Calvo and Topa (2019) revealed that training and instruction and positive feedback are the leadership behaviours most valued by athletes.

Pitts et al. (2018) determined that training and instruction and positive feedback are the most preferred leadership dimensions. The results of the aforementioned study confirmed the findings of previous studies concluding that autocratic behaviour is the least preferred leadership dimension. Furthermore, the democratic behaviour leadership dimension is preferred by student-athletes. Cruz and Kim (2017) observed that male athletes with female coaches prefer democratic behaviour and social support more than with male coaches. Conversely, female players with male coaches favour democratic behaviour and social support more than with female coaches. Ignacio III et al. (2017) found that coaches who adopt training and instruction and socially supportive leadership behaviours and give recognition, rewards and positive feedback produce highly satisfied athletes. Pido (2015) asserted that situational consideration leadership behaviour is the only significant predictor of athletes' satisfaction. However, Castillo et al. (2014) observed that autocratic coaching behaviour has a significant influence on the performance of individuals trying to master a skill. Finally, Ismail et al. (2020) argued that leadership behaviours such as training and instruction, democratic behaviour, social support and positive feedback have a significant relationship with athletes' satisfaction.

Problem Statement

In sports competitions, the main goal of players and coaches is to win (Duncan & Lorean, 2021). However, in Iraq, teenagers' sports achievements are discouraging (Rissan, 2020). One of the factors influencing athletes to win a game is their level of satisfaction (Mohammed et al., 2017). Many teams with star players lose to teams with low rankings. Such defeats may be due to the athletes' dissatisfaction with their leaders (Mohammed et al., 2017; Uqlla & Nezar, 2008). Athletes with high satisfaction levels will work hard in tournaments (Chelladurai, 1984). However, in Iraq, athletes' level of satisfaction is discouraging (Rissan, 2020; Uqlla & Nezar, 2008). What factors influence athletes' low satisfaction levels? According to many studies, sports leaders not only train their team but also create a team that can bring joy to the players' lives (Crust & Azadi, 2009).

In sports teams, the coach is also the team leader, whose role is to not only develop the players' skills and formulate game strategies but also transform the players' attitudes and mindset (Hassan, 1998). Although physical education teachers were also identified as leaders, not many leaders can identify the leadership styles preferred by athletes (Heil, 2018). In Iraq, coaches' leadership styles are not preferred by athletes owing to the coaches' lack of competency as leaders (Ali & Hassan, 2011). Accordingly, the following question was raised: What coaching leadership styles are preferred by athletes and affect athletes' satisfaction?

In addition, inconsistencies in previous studies (Calvo & Topa, 2019; Castillo et al., 2014; Chee et al., 2017; Ignacio III et al., 2017; Karreman et al., 2009; Pido, 2015; Yemiru, 2020; Yusoff & Muhamad, 2018) puzzled researchers as to which leadership styles are preferred by athletes and influence their satisfaction. Therefore, this study attempts to identify which leadership styles are preferred by athletes and determine to what extent the leadership styles of physical education teachers affect athletes' satisfaction.

Research Questions

Based on the above problem statement, this research attempts to answer the following questions:

1. What are the leadership styles of physical education teachers preferred by athletes?
2. Is the training and instruction behaviour leadership style of physical education teachers a predictor of athletes' satisfaction?
3. Is the democratic behaviour leadership style of physical education teachers a predictor of athletes' satisfaction?
4. Is the social behaviour leadership style of physical education teachers a predictor of athletes' satisfaction?
5. Is the positive feedback behaviour leadership style of physical education teachers a predictor of athletes' satisfaction?
6. Is the situational consideration behaviour leadership style of physical education teachers a predictor of athletes' satisfaction?
7. Is the autocratic behaviour leadership style of physical education teachers a predictor of athletes' satisfaction?

Hypotheses

Based on the research questions above, the following hypotheses are formulated to test at the 0.05 significance level.

- H₀₁: The training and instruction behaviour leadership style of physical education teachers is not a significant predictor of athletes' satisfaction.
- H₀₂: The democratic behaviour leadership style of physical education teachers is not a significant predictor of athletes' satisfaction.
- H₀₃: The social behaviour leadership style of physical education teachers is not a significant predictor of athletes' satisfaction.
- H₀₄: The positive feedback behaviour leadership style of physical education teachers is not a significant predictor of athletes' satisfaction.
- H₀₅: The situational consideration behaviour leadership style of physical education teachers is not a significant predictor of athletes' satisfaction.
- H₀₆: The autocratic behaviour leadership style of physical education teachers is not a significant predictor of athletes' satisfaction.

METHOD

Research Design

Various types of approaches and designs can be used in research. However, to answer the above questions and test the aforementioned hypotheses, this study used the quantitative approach, a cross-sectional survey and a correlational design. The quantitative approach was appropriate, as this study involved hypothesis testing, and the cross-sectional design was chosen, because the survey research design is the most practical design for a snapshot study and for collecting data from scattered respondents (Hair et al., 2007).

Study Population and Sampling

The target population of this study was secondary school students in Iraq. A total of 200 students from four schools in Baghdad, three schools in the northern part of Iraq, two schools in the western part of Iraq and three schools in the southern part of Iraq were selected randomly. Only the students who volunteered to participate in this study were sent a set of questionnaires via Google Forms.

Instrumentation

To measure physical education teachers' leadership styles, the RLSS by Zhang et al. (1997) was used. The Athlete Satisfaction Questionnaire (ASQ) developed by Reimer and Chelladurai (1998) was utilised to measure athletes' satisfaction with their coaches. Students in Iraq are comfortable with Arabic; thus, the questionnaires were translated into Arabic using the back-translation method proposed by Brislin et al. (1973).

The RLSS is widely used to measure athletes' preferred leadership styles owing to the validity of the constructs, as reported by Zhang et al. (1997). The RLSS includes 60 items measuring the six dimensions separately. The dimensions are 1) training and instruction (TI), 2) democratic behaviour (DB), 3) social behaviour, 4) positive feedback (PF), 5) situational consideration, and 6) autocratic behaviour (AB). The items for training and instruction is 10 items, (TI1–TI10), democratic behaviour is 12 items (DB11–DB22), social behaviour is eight items (SB23–SB30), positive feedback is 12 items (PF31–PF42), situational consideration is 10 items (SC43–SC52) and autocratic behaviour is eight items (AB53–AB60). Sample items are 1) 'I prefer my physical education teacher to use a variety of drills for practice', 2) 'I prefer my physical education teacher to ask the athletes for their opinion on strategies or specific competitions', 3) 'I prefer my physical education teacher to help the athletes with their personal problems', 4) 'I prefer my physical education teacher to pat an athlete on the back after a good performance', 5) 'I prefer my physical education teacher to set goals that are compatible with the athletes' ability' and 6) 'I prefer my physical education teacher to prescribe methods to be followed'.

The ASQ is a valid questionnaire and widely used owing to its validity, as reported by Reimer and Chelladurai (1998). The ASQ has a total of 14 items measuring athletes' satisfaction (AS1–AS14). Reimer and Chelladurai (1998) reported that the questionnaire is valid. Sample items include 1) 'I am satisfied with how the team works (worked) to be

the best' and 2) I am satisfied with the instructions I received from my physical education teacher this season'. Likert-type scales ranging from 1 (strongly disagree) to 5 (strongly agree) were used for both questionnaires to score the items. The higher the mean score, the higher the athletes' preference for the leadership styles of the coaches, and the higher the athletes' level of satisfaction.

Before the actual questionnaires were administered, a pilot study was conducted with 30 students in one of the selected schools in Iraq to test the reliability of the two questionnaires. The students involved in the pilot test were not included in the actual study. In addition to testing the reliability of the two instruments, the pilot test was conducted to obtain input from the respondents regarding ambiguous, inappropriate or incomprehensible questions. The Cronbach's alpha scores of all the RLSS dimensions were in the range of 0.807 to 0.901, and the score of the ASQ was 0.976. All the scores were above the reliability threshold of 0.07 (Nunnally & Bernstein, 1994).

Data Collection Procedure

Before the actual study was conducted, permission was obtained from the Iraq Ministry of Education, which acted as the ethical committee. After permission was granted by the Iraq Ministry of Education, the school principals were contacted individually to obtain their permission to collect data from the students in their school. After permission was granted by the school principals, the parents of the students were contacted to obtain consent to participate in the research. Subsequently, the questionnaires were distributed to the respondents. Along with the questionnaires, the data collection protocol was included, and confidentiality was assured. The respondents were informed that all the information obtained would be handled confidentially and would not be disclosed to other parties.

Data Analysis

Before the data were analysed, all the questionnaires were reviewed to ensure that the forms were complete. Incomplete questionnaires were excluded from the analysis. Of the 200 sets of questionnaires, 146 sets, or 73%, were returned by the respondents. However, after 10 sets were omitted owing to outlier data, only 136 sets of questionnaires were analysed.

To answer the research questions and test the hypotheses, the data were analysed using descriptive and inferential statistics. Mean and standard deviation were used to describe the athletes' preference for the leadership styles of physical education teachers, and partial least squares structural equation modelling (PLS-SEM) via SmartPLS 3.0 developed by Ringle et al. (2015) was used to test the measures and structural model as well as Hypotheses H₀₁ to H₀₆.

FINDINGS

Respondents' Profile

Tables 1 and 2 show the frequency of the gender and age of the athletes involved in this study.

Table 1
Gender of athletes

Gender	Frequency	Percentage
Boys	102	75.0
Girls	34	25.0
Total	136	100.0

According to Table 1, 102 (75.0%) male athletes, and 34 (25.0%) female athletes were included in this study.

Table 2
Age of athletes

Ages	Frequency	Percentage
15 years old and below	64	47.06
16 years old and above	72	52.94
Total	136	100.0

Table 2 shows that 64 (47.06%) of the athletes were 15 years old or below, and 72 (52.94%) were 16 years old or above.

Descriptive Statistics

The first question asked in this study was ‘What are the leadership styles of physical education teachers preferred by student-athletes?’ To answer this question, mean and standard deviation, as shown in Table 3, were used. The mean categories were determined using the formula $(5 \text{ minus } 1) \text{ divided by } 5$. This formula was used by Prianto et al. (2021) and Puriwat and Tripopsakul (2020).

Table 3
Mean score categories and interpretation

Categories of Means	Level	Interpretation of Preferred Styles	Interpretation of Athletes Satisfaction
1.00 – 1.80	Very Low	Least Preferred	Very unsatisfied
1.81 – 2.60	Low	Not Preferred.	Not Satisfied
2.61 – 3.40	Moderate	Moderately Preferred	Moderately Satisfied
3.41 – 4.20	High	Preferred	Satisfied
4.21 – 5.00	Very High	Highly preferred	Very Satisfied

Table 4
Mean and standard deviation of leadership styles of physical education teachers

Variable	Mean	Standard Deviation	Interpretation
TI	4.3912	.48526	Highly preferred
DB	3.8836	.76297	Preferred
SB	4.2794	.58930	Highly preferred
PF	4.3333	.55667	Highly preferred
SC	4.3088	.56062	Highly preferred
AC	3.3382	1.07153	Moderately preferred
ASQ	3.6019	1.28514	Satisfied

Table 4 reveals that the mean and standard deviation of the TI leadership style of the physical education teachers were 4.39 and 0.49, respectively. This finding meant that the TI leadership style was highly preferred by the athletes. Meanwhile, the least preferred leadership style was AB, a with mean of 3.4 and standard deviation of 1.07.

Measurement Model and Structural Model

Before structural and hypothesis testing was conducted, assessing the measurement model of the study was necessary. To achieve this goal, SmartPLS 3.0 developed by Ringle et al. (2015) was used to examine the convergent and discriminant validity of the measurement model. Figure 1 presents the measurement model and structural model of the study.

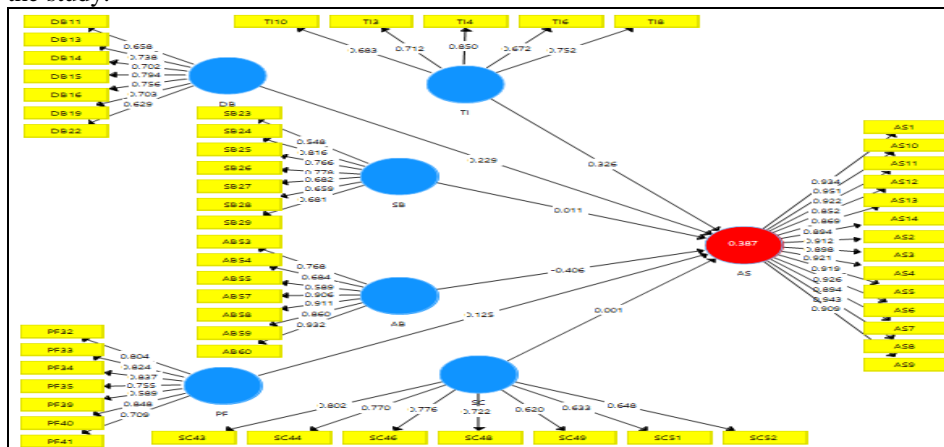


Figure 1 Measurement model and structural model

To assess the convergent validity, indicator loadings, composite reliability (CR) and the average variance extracted (AVE) were used. The minimum accepted value for indicator loadings is 0.708, that for CR is 0.70 and that for the AVE is 0.50 (Hair et al., 2014). To assess the discriminant validity, cross loadings, the Fornell–Larcker criterion and the Heterotrait-Monotrait Ratio (HTMT) criterion were employed. Table 5 presents the convergent validity data of the measurement model.

Table 5
Convergent validity of measurement model

Construct	Items/Indicators	Loadings	AVE	CR	Convergent Validity?
TI	TI3	0.683	0.543	0.855	Yes
	TI4	0.712			
	TI6	0.850			
	TI8	0.672			
	TI10	0.752			
DB	DB11	0.658	0.509	0.878	Yes
	DB13	0.738			
	DB14	0.702			
	DB15	0.794			
	DB16	0.756			
	DB19	0.703			
	DB22	0.629			
SB	SB23	0.548	0.503	0.875	Yes
	SB24	0.816			
	SB25	0.766			
	SB26	0.778			
	SB27	0.682			
	SB28	0.659			
	SB29	0.681			
PF	PF32	0.804	0.595	0.910	Yes
	PF33	0.824			
	PF34	0.837			
	PF35	0.755			
	PF39	0.589			
	PF40	0.848			
	PF41	0.709			
SC	SC43	0.802	0.509	0.878	Yes
	SC44	0.770			
	SC46	0.776			
	SC48	0.722			
	SC49	0.620			
	SC51	0.633			
AB	SC52	0.648	0.666	0.932	Yes
	AB53	0.768			
	AB54	0.684			
	AB55	0.589			
	AB57	0.906			
	AB58	0.911			
	AB59	0.860			

	AB60	0.932			
ASQ	AS1	0.934	0.829	0.985	Yes
	AS2	0.951			
	AS3	0.922			
	AS4	0.852			
	AS5	0.869			
	AS6	0.894			
	AS7	0.912			
	AS8	0.898			
	AS9	0.921			
	AS10	0.919			
	AS11	0.926			
	AS12	0.894			
	AS13	0.943			
	AS14	0.909			

Table 5 shows that the indicator loadings of the RLSS dimensions, namely, TI (five items), DB (seven items), SB (seven items), PF (seven items), SC (seven items) and AB (seven items), were between 0.548 and 0.932. The CR value of TI, DB, SB, PF, SC and AB ranged from 0.855 to 0.932, and the AVE value of the six dimensions was between 0.503 and 0.666. Byrne (2016) argued that if the sum of the indicator loadings of items contributing to a dimension's AVE score is greater than 0.5, then the items with loadings of 0.50 can be retained. However, 16 items of the RLSS, namely, AB56, DB20, DB21, DB17, DB18, DB12, PF36, PF37, SB30, SC50, SC47, TI1, TI7, TI9, TI5 and TI2, were deleted in the final model owing to very low loadings and their non contribution to the AVE threshold point. In addition, four items, that is, PF31, PF38, PF42 and SC45, were deleted owing to cross loadings with other constructs less than 0.1. According to Chin (1998), cross loadings with a value < 0.1 must be deleted. Finally, 40 RLSS items were retained in the final measurement model. For AS (in the ASQ), the indicator loadings ranged from 0.852 to 0.951, the CR value was 0.985 and the AVE value was 0.829. Therefore, the ASQ items were acceptable. In summary, the convergent validity of the RLSS and ASQ was achieved. Table 5 demonstrates the format proposed by Hair et al. (2014) and Ramayah et al. (2018) and currently used by Khun-Inkeeree et al. (2021).

In terms of the discriminant validity assessment of the measurement model, Table 6 confirms the absence of cross loadings less than 1.0. According to Chin (1998), if no cross loadings less than 1.0 are observed, then the cross-loading criterion is achieved, and the discriminant validity is acceptable. Table 7 shows that all the values of the square root of the AVE (in bold and diagonal) were greater than the correlation values (off-diagonal). Hair et al. (2014) stated that if the square root of the AVE is greater than the correlation value, then the discriminant validity criterion is fulfilled. Table 8 reveals that all the HTMT criterion values were less than 0.850. According to Kline (2015), if the HTMT criterion value is smaller than 0.850, then discriminant validity is achieved. Therefore, based on the cross loading, Fornell–Larcker criterion and HTMT criterion values in Tables 6, 7 and 8, it can be concluded that the measurement model

demonstrated discriminant validity, as the constructs differed distinctly from one another.

Table 6
Discriminant validity using cross loadings

	AB	DB	PF	SB	SC	TI	ASQ
AB53	<u>0.768</u>	0.195	0.011	-0.046	0.167	0.152	-0.134
AB54	<u>0.684</u>	0.314	0.050	0.117	0.190	0.068	-0.194
AB55	<u>0.589</u>	0.207	0.170	0.158	0.450	0.317	-0.168
AB57	<u>0.906</u>	0.200	-0.055	-0.090	0.065	0.125	-0.256
AB58	<u>0.911</u>	0.313	-0.148	-0.068	0.048	0.103	-0.288
AB59	<u>0.860</u>	0.225	-0.050	-0.047	0.121	0.144	-0.278
AB60	<u>0.932</u>	0.178	-0.167	-0.111	0.015	0.057	-0.316
DB11	0.168	<u>0.658</u>	0.057	0.246	0.262	0.413	0.234
DB13	-0.052	<u>0.738</u>	0.424	0.507	0.337	0.358	0.383
DB14	0.283	<u>0.702</u>	0.049	0.302	0.139	0.256	0.101
DB15	0.367	<u>0.794</u>	0.144	0.272	0.278	0.546	0.237
DB16	0.334	<u>0.756</u>	0.276	0.337	0.302	0.401	0.147
DB19	0.347	<u>0.703</u>	-0.001	0.113	0.277	0.190	0.091
DB22	0.418	<u>0.629</u>	0.041	0.234	0.359	0.353	0.118
PF32	-0.054	0.209	<u>0.804</u>	0.504	0.536	0.267	0.363
PF33	-0.067	0.161	<u>0.824</u>	0.705	0.487	0.309	0.150
PF34	0.060	0.169	<u>0.837</u>	0.543	0.473	0.302	0.231
PF35	-0.087	0.338	<u>0.755</u>	0.588	0.607	0.324	0.259
PF39	0.221	0.361	<u>0.589</u>	0.477	0.465	0.163	0.049
PF40	-0.055	0.231	<u>0.848</u>	0.579	0.417	0.388	0.226
PF41	-0.118	0.150	<u>0.709</u>	0.476	0.437	0.190	0.308
SB23	-0.114	0.177	0.414	<u>0.548</u>	0.215	0.145	0.240
SB24	-0.088	0.313	0.637	<u>0.816</u>	0.545	0.400	0.295
SB25	-0.103	0.298	0.545	<u>0.766</u>	0.509	0.409	0.269
SB26	0.077	0.423	0.486	<u>0.778</u>	0.405	0.453	0.348
SB27	-0.242	0.043	0.553	<u>0.682</u>	0.377	0.312	0.229
SB28	0.153	0.477	0.408	<u>0.659</u>	0.467	0.500	0.276
SB29	0.074	0.469	0.423	<u>0.681</u>	0.442	0.383	0.265
SC43	0.096	0.296	0.423	0.359	<u>0.802</u>	0.325	0.187
SC44	0.040	0.378	0.459	0.550	<u>0.770</u>	0.313	0.220
SC46	0.146	0.339	0.422	0.435	<u>0.776</u>	0.499	0.191
SC48	0.068	0.223	0.568	0.471	<u>0.722</u>	0.396	0.140
SC49	0.105	0.137	0.487	0.329	<u>0.620</u>	0.206	0.250
SC51	0.172	0.350	0.357	0.452	<u>0.633</u>	0.315	0.176
SC52	0.211	0.465	0.491	0.483	<u>0.648</u>	0.501	0.036
TI3	0.125	0.428	0.255	0.370	0.458	0.683	0.150
TI4	0.133	0.334	0.133	0.305	0.177	<u>0.712</u>	0.303
TI6	0.047	0.385	0.458	0.569	0.379	<u>0.850</u>	0.435
TI8	0.141	0.411	-0.014	0.121	0.349	<u>0.672</u>	0.318
TI10	0.155	0.469	0.453	0.565	0.447	<u>0.752</u>	0.300
AS1	-0.207	0.376	0.334	0.412	0.353	0.474	<u>0.934</u>
AS2	-0.214	0.373	0.287	0.296	0.267	0.406	<u>0.912</u>
AS3	-0.259	0.312	0.296	0.309	0.216	0.353	<u>0.898</u>
AS4	-0.302	0.354	0.393	0.396	0.279	0.324	<u>0.921</u>
AS5	-0.325	0.262	0.277	0.432	0.246	0.434	<u>0.919</u>
AS6	-0.342	0.217	0.271	0.362	0.226	0.427	<u>0.926</u>

AS7	-0.256	0.267	0.208	0.386	0.242	0.487	0.894
AS8	-0.265	0.291	0.192	0.293	0.222	0.390	0.943
AS9	-0.347	0.280	0.413	0.449	0.264	0.440	0.909
AS10	-0.392	0.261	0.319	0.372	0.233	0.422	0.951
AS11	-0.308	0.244	0.334	0.359	0.231	0.420	0.922
AS12	-0.166	0.366	0.378	0.290	0.277	0.355	0.852
AS13	-0.213	0.270	0.353	0.279	0.195	0.289	0.869
AS14	-0.166	0.355	0.266	0.314	0.207	0.324	0.894

Note: No cross loadings < 1.0

Table 7
Discriminant validity using fornell-larcker criterion

	AB	DB	PF	SB	SC	TI	ASQ
AB	0.816						
DB	0.280	0.713					
PF	-0.062	0.276	0.771				
SB	-0.035	0.459	0.697	0.709			
SC	0.149	0.404	0.632	0.601	0.714		
TI	0.151	0.536	0.363	0.535	0.472	0.737	
ASQ	-0.300	0.329	0.340	0.392	0.273	0.439	0.911

Note: $\sqrt{\text{AVE}}$ (diagonal) > correlation (off-diagonal)

Table 8
Discriminant validity using HTMT criterion

	AB	DB	PF	SB	SC	TI	ASQ
AB							
DB	0.444						
PF	0.189	0.298					
SB	0.233	0.514	0.834				
SC	0.252	0.485	0.740	0.729			
TI	0.228	0.612	0.451	0.640	0.653		
ASQ	0.299	0.283	0.317	0.425	0.265	0.456	

Note: HTMT < 0.85 (Kline, 2015)

Hypothesis Testing

To test the hypotheses, the bootstrapping procedure in SmartPLS 3.0 was used, as suggested by Ringle et al. (2015). Before the hypotheses were tested, the collinearity issue in the structural model was verified to determine the absence of multicollinearity between the independent and dependent variables. Kock and Lynn (2012) cautioned that though discriminant validity is achieved, the lateral collinearity issue (predictor-criterion collinearity) must be examined. Table 9 shows that the variance inflator factor (VIF) index ranged from 1.174 to 2.625, which is below 5. Hair et al. (2014) asserted that if

the VIF index is less than 5, then no multicollinearity exists between the independent and dependent variables. Therefore, the hypothesis testing can be performed. In this study, six hypotheses were tested, and t-statistics were used to either reject or accept the hypotheses.

Table 9
Results of hypothesis testing

H ₀	R	Std Beta	Std Dev.	t-value	p	Decision	R ²	f ²	VIF
H ₀₁	TI -> ASQ	0.326	0.098	3.314	0.000	Failed to reject	0.106	0.101	1.707
H ₀₂	DB -> ASQ	0.229	0.084	2.720	0.003	Failed to reject	0.052	0.052	1.639
H ₀₃	SB -> ASQ	0.011	0.107	0.100	0.460	Rejected	-	0.000	2.625
H ₀₄	PF -> ASQ	0.125	0.094	1.335	0.091	Rejected	-	0.011	2.342
H ₀₅	SC -> ASQ	0.001	0.099	0.014	0.494	Rejected	-	0.000	2.041
H ₀₆	AB -> ASQ	-0.406	0.062	6.546	0.000	Failed to reject	0.164	0.229	1.174

Note: H₀ = null hypothesis, R = relationship

Based on the statistics in Table 9, it can be seen that three RLSS dimensions, namely, AB, DB and TI, were significant predictors of AS (TI: $\beta = 0.326$, $t = 3.314$, $p = 0.001$; DB: $\beta = 0.229$, $t = 2.720$, $p = 0.003$; AB: $\beta = -0.406$, $t = 6.546$, $p = 0.001$). The R² of TI = 0.106 explained 10.6% of the variance in ASQ, DB = 0.052 explained 5.2% of the variance in ASQ and AB = 0.164 explained 16.4% of the variance in ASQ. However, the relationship between AB and ASQ was an inverse relationship. The R² value total of 0.332 is above 0.26, which indicated that the model was substantial. Cohen (1988) suggested that if the R² value is above 0.26, then the model is substantial. Furthermore, the f² values of the model were between 0.052 and 0.229. Based on Cohen's criteria (1988), the values ranged from a small effect to a medium effect size. Therefore, the null hypotheses stating that AB, DB and TI were not significant predictors of ASQ were rejected. This finding meant that to increase athletes' satisfaction, physical education teachers must adopt the training and instruction behaviour and democratic behaviour leadership styles and reduce their use of the autocratic behaviour leadership style.

DISCUSSION

Leadership Styles of Physical Education Teachers Preferred by Athletes

This study finds that the leadership style of physical education teachers most preferred by the students in Iraq is training and instruction behaviour. This preference is in line with the study of Chee et al. (2017) and Calvo and Topa (2019), which found that the coaching style most preferred by athletes is training and instruction behaviour, whereas their least preferred style is autocratic behaviour. This finding is also in line with the results of Yusoff and Muhamad (2018) and Pitts et al. (2018).

This situation occurs, because child athletes have yet to establish clear goals for their future in sports (Bailey et al., 2013). Children participate in sports as a hobby or to socialise with friends (Bailey et al., 2013; Weiss & Smith, 2002). Quoidbach et al. (2019) argued that people seek social interaction to be happy. Thus, they focus on aspects that bring them pleasure rather than on the training quality. Furthermore, teen athletes are not motivated when their coaches, parents and schoolmates overemphasise winning (Bailey et al., 2013). According to Bailey et al. (2013), overemphasis on winning makes athletes fear failure and ultimately withdraw from sports participation.

Moreover, when coaches use the autocratic behaviour leadership style, they promote intrateam rivalries and punish players for making mistakes. Such actions can demotivate teen athletes (Newton et al., 2000). In addition, when coaches use the autocratic behaviour leadership style during coaching sessions, teen athletes may not have fun (Bum & Shin, 2015; Kim & Cruz, 2016; Weiss, 1993; Weiss, 2009). Moreover, according to Barnett et al. (2017) and Logan and Cuff (2019), teenagers participate in sports to have fun; thus, the autocratic behaviour leadership style may have a negative effect on athletes' motivation to participate. Therefore, to encourage teenagers to willingly participate in sports, coaches must adopt the training and instruction behaviour leadership style and reduce their use of the autocratic behaviour leadership style.

Dimensions of Leadership Styles of Physical Education Teachers as Predictors of Athletes' Satisfaction

This study determines that the training and instruction behaviour, democratic behaviour and autocratic behaviour leadership styles are significant predictors of athletes' satisfaction. Of the three significant predictors, the training and instruction behaviour and democratic behaviour leadership styles positively impact athletes' satisfaction, whereas the autocratic behaviour leadership style negatively influences athletes' satisfaction. The research findings can be interpreted as follows: physical education teachers' use of the training and instruction behaviour and democratic behaviour leadership styles can increase athletes' satisfaction, whereas physical education teachers' use of the autocratic behaviour leadership style can decrease athletes' satisfaction. The findings of this study support the theoretical assumptions posited by Reimer and Chelladurai (1998), that is, leadership is a determinant of athletes' satisfaction. In addition, the findings of this study are in line with the study of Kim and Cruze (2016), Ignacio III et al. (2017), Yusoff and Muhamad (2018) and Ismail et al. (2020), which found that coaches' leadership styles have a strong influence on athletes' satisfaction.

This situation occurs, because according to Reimer and Chelladurai (1998), the frequency of physical education teachers' use of appropriate leadership styles, such as training and instruction behaviour and democratic behaviour, will make athletes happy during their training sessions and thus satisfied with their coaches. Happiness is felt, because when a physical education teacher adopts a clear training pattern and instructions, the athletes can easily perform appropriate actions in accordance with their sports competition goals (Bailey et al., 2013). Young athletes participate in sports to have fun with their friends (Weiss & Smith, 2002).

In addition, when physical education teachers adopt the democratic behaviour leadership style, such as practicing open communication and giving athletes opportunities to discuss issues related to their training and performance, athletes will be happy (Kello, 2011). Furthermore, this style of leadership involves two-way communication between coaches and athletes; thus, athletes may feel that they can approach their coaches easily to get advice or when reprimanded, which can ultimately reduce the athletes' stress in dealing with physical education teachers (Woods, 2007). This situation can make athletes happy to participate in training, which they can apply to competitions, thereby achieving their sports competition goals. Achievement in competitions can increase athletes' happiness (Woods, 2007). Kim and Cruz (2016) revealed that the democratic behaviour leadership style positively affects athletes' satisfaction. Furthermore, Quidbach et al. (2019) observed that happy people are highly motivated to perform assigned tasks.

Moreover, happiness will increase when physical education teachers refrain from using the autocratic behaviour leadership style (Bailey et al., 2013), as athletes will feel less depressed. Typically, a coach using the autocratic behaviour leadership style will require athletes to accomplish tasks beyond their abilities, which may eventually cause the athletes to feel depressed when dealing with physical education teachers who adopt such a leadership style. This situation makes athletes unhappy to exercises in relation to competitions. Accordingly, the autocratic behaviour leadership style is not suitable for coaching adolescent and nonprofessional athletes. Kim and Cruz (2016) mentioned that coaches perceived to use the autocratic behaviour leadership style can influence athletes' negative feelings. Finally, Oswald et al. (2009) argued that happy people are productive people.

IMPLICATIONS

Theoretical Implications

The findings of this study have two direct implications. In terms of the theoretical implication, the findings contribute to the expansion of theories on the leadership styles of physical education teachers and athletes' satisfaction in the context of the education sector in Iraq.

Practical Implications

For the practical implications, this study suggests that to increase athletes' level of happiness, factors such as overt control and open criticisms should be avoided by coaches (Mageau & Vallerand, 2003).

Therefore, to improve athletes' level of satisfaction, efforts should be made by physical education teachers to adopt the training and instruction behaviour and democratic behaviour leadership styles in training sessions. In addition, this study suggests that to increase athletes' level of satisfaction, physical education teachers should avoid using the autocratic behaviour leadership style in training sessions.

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE STUDIES

Although this study was conducted with caution by considering relevant statistical methods and techniques, limitations exist. The first limitation is related to sampling. Although the use of PLS-SEM allows researchers to use a small sample, future studies should use a large sample to be able to generalise results.

The second limitation is related to the dependent variable of the study, which is athletes' satisfaction. Future studies should use other dependent variables, such as motivation, commitment and athletes' performance. In addition, future studies should use moderating variables such as gender, age and type of sports, because such variables can affect the relationship between coaches' leadership styles and athletes' satisfaction.

CONCLUSION

The leadership styles of physical education teachers are important for increasing athletes' satisfaction and thus performance. Although choosing the most appropriate leadership styles for their athletes is difficult for physical education teachers, this study sheds some light on this issue. Specifically, this study reveals that training and instruction behaviour is the leadership style most preferred by athletes, whereas autocratic behaviour is their least preferred leadership style. In addition, this study finds that the training and instruction behaviour and democratic behaviour leadership styles can positively influence athletes' satisfaction, whereas the autocratic behaviour leadership style can negatively affect athletes' satisfaction.

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