

## Coaching style, sport enjoyment, and intent to continue participation among artistic swimmers

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*Published in:*  
International Journal of Sports Science and Coaching

*DOI:*  
[10.1177/1747954120984054](https://doi.org/10.1177/1747954120984054)

Published: 01/06/2021

*Document Version:*  
Peer reviewed version

[Link to publication](#)

*Citation for published version (APA):*  
Kim, S., Park, S., Love, A., & Pang, T. C. (2021). Coaching style, sport enjoyment, and intent to continue participation among artistic swimmers. *International Journal of Sports Science and Coaching*, 16(3), 477-489. <https://doi.org/10.1177/1747954120984054>

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### **ABSTRACT**

Using situational leadership models, the current study examined direct and indirect relationships between coaching styles (i.e., democratic and autocratic) and athletes' intent to continue participation via enjoyment in the sport of artistic swimming. Data were collected using an online survey with a snowball sampling method. A total of 202 artistic swimmers at the elite level from 22 countries participated in this study. The findings showed that participants who trained with democratic-style coaches reported higher levels of athletic enjoyment and intent to continue their athletic careers. There was no mediating effect of athletic enjoyment between coaching styles and intent to continue via athletic enjoyment; instead, the results revealed that the direct path between athletic enjoyment and intent to continue was not significant. However, the results supported the direct relationships between both coaching styles and athletic enjoyment and between autocratic coaching style and intent to continue an athletic career.

**Keywords:** Autocratic leadership, democratic leadership, sport enjoyment, intent to continue participation, elite athletes

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### INTRODUCTION

Numerous factors (e.g., programmes, support, colleagues, and coaches) may affect athletes' enjoyment of sports and their decisions to continue or withdraw from sport participation [1, 2]. Among these factors, coaches play a particularly important role in athletes' experiences, influencing their enjoyment, development, and success [3, 4]. In fact, the athlete-coach relationship can be more influential in the development of athletes' physical and psychological well-being than the athlete-parent relationship [5], as competitive athletes often spend more time with their coaches than their parents [6]. Coaches' primary responsibilities include designing training programmes, supervising trainings, and planning tactical support for their teams and athletes before and during competitions [7]. However, a coach may serve multiple roles, including that of a mentor, a teacher, and a leader, placing them in a position to heavily influence athletes' lives and careers [8]. Given this influence, Denison and Avner [9] and Mills and Denison [10] argued that coaches should make a concerted effort to become positive forces for athletes' holistic development.

Many studies in the literature have insisted that the ways coaches communicate with and train their athletes are critical in shaping athletic experiences. These studies have revealed that athletes' enjoyment of their sports is a key factor in their persistence and performance [11, 12]. Coaches are responsible for providing and maintaining conditions that are conducive to athletes performing at their full potential. Coaches should have an appropriate coaching style that earns the respect of athletes and motivates them to improve [13]. However, a coach is often the main reasons for athletes having concerns about continuing their athletic careers, as the relationship between a coach and an athlete may impact many aspects of the athlete's physical and psychological well-being [14]. For example, Stirling and Kerr [15] found athletes who perceived their coaches as emotionally abusive (i.e., a pattern of deliberate non-contact behaviors)

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experienced negative psychological effects (e.g., depression, anger, low self-efficacy), training effects (e.g., decreased motivation, reduced enjoyment), and performance detriments. However, some coaches may underestimate their impact as mentors and are more interested in winning and achievement than creating an environment that provides athletes with the best experience and value [14]. Coaches who create negative experiences for their athletes are interfering with the athletic environment and affecting the coach–athlete relationship [16], which negatively impacts athletes' participation and their attitudes toward sports. Ultimately, athletes may choose to withdraw from sport due to bad relationships with their coach [17].

Given the deep relationship between coaches and athletes, coaches are influential figures who have a strong impact—positive or negative—on athletes' lives and careers [8]. This impact can be even greater for athletes at the elite level, as they spend considerable time in intensive training with coaches. For elite athletes who regard their sports as an important part of their lives, decisions about whether to continue or withdraw from their athletic careers is an important issue. According to situational leadership models, it is important to understand athletes' preferences for different coaching styles to improve the development of both sports and athletes [14]. In other words, coaches should use situationally appropriate leadership styles based on athletes' levels of maturity (e.g., skill and ability, willingness to take responsibility) and preferences [18, 19, 20].

Therefore, the current study explored the direct and indirect relationships between coaching styles (i.e., democratic and autocratic) and athletes' intent to continue training. The specific focus of the study was the enjoyment of elite artistic swimmers. The sport of artistic swimming, which includes solo, duet, and team competitions, is likely familiar to most people under the name "synchronized swimming." However, FINA (Fédération Internationale de Natation), the sport's international governing body, officially adopted the term "artistic

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swimming" in 2017. Using artistic swimming as a context for examining the relationships between coaching styles and outcomes at the elite level is meaningful for multiple reasons. The sport of artistic swimming is unique in nature, requiring participants to perform complex choreographed routines precisely and synchronously with teammates while below and above the water. This requires intensive training and in-depth interaction between coaches and athletes in preparation for competitions [21]. Majority of elite athletes in this sport are female young.

### **RESEARCH MODEL**

The current study adopted situational leadership models [18, 19, 22] to develop a conceptual framework of the relationships between coaching styles, athletic enjoyment, and intent to continue a sport. The model includes four variables: (a) democratic coaching style, (b) autocratic coaching style, (c) athletic enjoyment, and (d) intent to continue a sport, as illustrated in Figure 1.

[Insert Figure 1 about here]

### **SITUATIONAL LEADERSHIP MODELS**

Situational leadership theory was introduced by Hersey and Blanchard [23] as the “life cycle theory of leadership.” The authors developed the theory throughout the late 1970s and early 1980s. Building from this work, situational leadership models [18, 19, 22, 23] insist that there is no single leadership style suitable for all situations. Further, situational leadership is not based on a leader's specific skills but rather on modification of their leadership style to suit the needs and conditions of their organization. Therefore, one of the most vital principles of situational leadership models is a leader's adaptability. Such leadership models require effective leaders to insightfully consider subordinates' status and adapt their leadership style to the situation. Adair's [24] action-centred leadership model suggests that the most effective leaders must be sensitive to task needs, group needs, and individual needs in their organizations and be

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able to balance all three areas to maximize performance. In other words, effective coaches as team leaders should be able to gain insights to understand their athletes' ability and willingness to learn skills and complete tasks, and they should adopt appropriate coaching styles to suit the situation. However, coaches who adhere to an autocratic leadership style tend to emphasize their power and ability to control athletes and believe that only their distinct philosophy can lead to success [25, 26]. In other words, autocratic coaches tend to be inflexible, even in cases where it would be more effective to adopt a different leadership style, such as when mentoring more experienced athletes who may prefer a democratic style.

Situational leadership models emphasize the importance of an adaptive leadership style to address subordinates' leadership needs based on their maturity levels. Hershey and Blanchard [19] defined maturity as "the ability and willingness of people to take responsibility for directing their own behaviors" (p. 151). The Hershey-Blanchard situational leadership theory classified subordinates into four groups according to their maturity levels. Subordinates who are highly capable and confident possess experience and ability, and they are more likely to prefer a subordinate-centred leadership style that uses delegating behaviours. People who are less capable and insecure lack skills and ability, meanwhile, and are more likely to prefer a leader-centred leadership style that uses directive behaviours. In the context of sport, coaches should adapt their coaching style to suit athletes' preferences depending on their skill and maturity, which theoretically improves coaching effectiveness [20]. Chelladurai's [27] Multidimensional Model of Leadership (MML) was originally developed based on situational leadership models (e.g., Hersey and Blanchard's [28] Situational Leadership theory, House's [29] Path-Goal theory, and Fiedler's [30] Contingency Theory). The MML model proposes that coaches must use appropriate behaviours in response to preferred coaching styles based on antecedent factors, such as

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situational characteristics, a coach's personal characteristics, and members' characteristics.

Chelladurai's MML has been extensively applied in the context of sport.

### DEMOCRATIC COACHING STYLE

In a democratic coaching style, athletes are encouraged to participate actively in the decision-making process [12]. Such an approach emphasizes relationships and communication between a coach and athletes. Democratic coaches set rules and provide instructions for athletes while also asking players for their perspectives [31]. Mageau and Vallerand [12] identified five specific coaching behaviours as examples of a democratic style: (a) providing alternatives to athletes under specific regulations and limits, (b) explaining rationales for tasks and limits to athletes, (c) considering athletes' feelings and viewpoints, (d) giving athletes opportunities to become independent by making their own decisions on some tasks, and (e) providing non-controlling feedback and avoiding controlling behaviours (e.g., criticism and mandatory instructions).

Coaches with a democratic style develop an encouraging atmosphere in which athletes can learn and train—an atmosphere that also cultivates a cohesive team. In this environment, athletes can comfortably engage in their tasks and training processes [32]. This low-intensity and relaxed atmosphere reduces stress in a team, allowing athletes to be more physically and emotionally comfortable, which may lead to higher participation rates. However, Lyle and Cushion [32] also expressed some concerns over a democratic coaching style. For example, athletes may ignore and disrespect a democratic coach's instructions by challenging their authority. According to Castillo et al. [31], democratic coaches tend to establish vague goals rather than rigorous and measurable goals, which may prevent athletes from accomplishing their tasks effectively.

### AUTOCRATIC COACHING STYLE

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An autocratic style refers to a leadership style based on the assumption that authority and decision-making should be highly centralized [33]. This style assumes that the coach should make all decisions for a team rather than asking for athletes' opinions. This leadership style is often observed in the context of sport, as coaches believe autocratic tactics can be used as a means to achieve important goals [34]. Coaches with autocratic leadership styles require that athletes be self-disciplined and highly obedient to the rules as well as respectful of the coaches and their decisions. Autocratic coaches use their position of power to influence athletes to follow their directions. Such coaches inform athletes how to behave and determine how each athlete can contribute to the team [31].

Castillo et al. [31] assert that an autocratic coaching style can be effective and beneficial in situations where athletes need a high level of guidance and instructions. They also argue that an autocratic coaching style is more likely to be effective at improving athletes' performance in closed-skill sports such as dancing, swimming, artistic swimming, and running. Closed-skill sports refer to sports in which the environment is relatively constant, foreseeable, and self-paced [35]. In addition, when athletes themselves believe discipline and obedience are the keys to successfully learning skills and achieving high levels of performance, they are more likely to benefit from autocratic coaches [36]. Van Vugt et al. [34] also proposed that autocratic coaching styles could be more appropriate for athletes who are in earlier phases of learning and developing their skills. Lyle and Cushion [32] noted that autocratic coaching is a one-way learning process. It involves little empathy, and the autocratic coach is the sole arbiter for regulations, rewards, and standards on a team. The autocratic coach also tends not to provide any alternatives or explanations for his or her athletes [12].



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Advantages of this coaching style are that it allows a coach to make quick decisions during training or competition and may make athletes more focused on their tasks and obedient to the rules. Under this strict structure and supervision based on specific goals, athletes may become more accomplishment-oriented, as their goals are more specified. However, there are often negative impacts of this coaching style. Although autocratic coaches provide some feedback to their athletes, this feedback is often negative or not encouraging. Because autocratic coaches employ mandatory strategies to force athletes to comply with their rules and instructions, the failure to comply with coaches' expectations or rules could lead to punishment, such as when athletes are not able to complete the scheduled tasks or when the tasks are not done in the way that the autocratic coaches desired. Given this situation, athletes who train under autocratic coaches focus on performing tasks in such a way as to impress their coaches and avoid punishment [36]. As a result, such athletes are more likely to resent their autocratic coaches and show decreased levels of loyalty and dedication to their team or coaches.

## EFFECTS OF COACHING STYLES

Coaches may have a positive or negative impact on athletes through different coaching styles [13]. In particular, coaches' behaviours can influence athletes' motivation and enjoyment of sports. The current study included enjoyment as an outcome of coaching styles. Enjoyment in sport can be defined as a "positive affective response to the sport experience that reflects generalized feelings such as pleasure, liking and fun" [37]. Numerous studies have also shown that athletes' emotional reactions when interacting a coach are closely associated with their motivation to continue (or discontinue) working with the coach and participating in their sport [33].

Each coaching style has unique communication methods. A coach's communication style can have a positive or negative effect on athletes depending on whether it fulfils or neglects their

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psychological needs and feelings. Congruency between coaching behaviours and athletes' preferences should have a positive effect on athletes' satisfaction [38]. In other words, when athletes perform under the coaching style that is optimal for them, they have a higher level of enjoyment and a positive experience, which relates to their eventual intent to continue participating in sport [39].

According to self-determination theory [12], coaches are crucial in ensuring athletes' enjoyment of sports. Athletic enjoyment should relate to not only an athlete's personal and emotional attitudes toward sports, but also to coaching style and behaviours within a team. For instance, coaches who emphasize technical and athletic guidance help provide athletes with an enjoyable sporting experience, and that enjoyment is correlated with athletes' intent to continue sport participation [40]. Although enjoyment is one of the critical factors for sustained involvement in sports, particularly in youth sport [41, 42], little effort has been made in the literature to examine the effects of adults (e.g., coaches and parents) on enjoyment [43].

An indication of self-motivation is that an individual's participation in an activity occurs out of interest or enjoyment. Thus, level of enjoyment is essential to one's intent to continue a certain behaviour [44], such as sport participation and withdrawal. Amorose and Horn [45] discovered that a high degree of intrinsic motivation, including enjoyment, exists in athletes whose coaches emphasize training and instruction and exhibit coaching styles that show high democratic and low autocratic behaviours. Barnett, Smoll, and Smith [46] also found that athletes who participated in training led by coaches with democratic styles showed high levels of positive attitudes, self-esteem, and enjoyment of the sport and low levels of sport withdrawal, indicating that coaching style may influence athletes' perceptions of sport experience and their decisions to continue sport participation. Democratic coaching behaviours help athletes pursue

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their psychological needs in a supportive atmosphere. According to the premise of self-motivation, when psychological needs are met, one will enjoy activities, resulting in a willingness and effort to improve [13]. In contrast, Ryan, Frederick, Leps, Rubio, and Sheldon [47] argue that an autocratic coaching style has the potential to improve conformity and involuntary motivation while reducing athletes' intrinsic motivations.

Based on the existing body of research and situational models of leadership, the investigators in the current study hypothesized that the outcome variables (i.e., enjoyment of sport and intent to continue sport participation) would be directly and indirectly influenced by coaching styles (i.e., democratic and autocratic coaching styles). Specifically, the study tested nine hypotheses:

- Hypothesis 1: Athletes led by coaches with a democratic coaching style will report significantly higher levels of enjoyment in artistic swimming than athletes led by coaches with an autocratic coaching style.
- Hypothesis 2: Athletes led by coaches with a democratic coaching style will report significantly higher levels of intent to continue artistic swimming than athletes led by coaches with an autocratic coaching style.
- Hypothesis 3a: A democratic coaching style will have a direct relationship with athletic enjoyment.
- Hypothesis 3b: An autocratic coaching style will have a direct relationship with athletic enjoyment.
- Hypothesis 4a: A democratic coaching style will have a direct relationship with intent to continue one's athletic career.

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- Hypothesis 4b: An autocratic coaching style will have a direct relationship with intent to continue one's athletic career.
- Hypothesis 4c: Athletic enjoyment will have a direct relationship with intent to continue one's athletic career.
- Hypothesis 5a: A democratic coaching style will have an indirect relationship with intent to continue one's athletic career via athletic enjoyment.
- Hypothesis 5b: An autocratic coaching style will have an indirect relationship with intent to continue one's athletic career via athletic enjoyment.

## METHOD

### PARTICIPATION AND SURVEY PROCEDURE

The population of the current study consisted of elite artistic swimmers who competed at the international level. This study used an online survey with a snowball sampling technique to collect data. To recruit participants, the investigators sent an initial e-mail with a link to the survey to 38 artistic swimmers from 15 different countries; in addition to inviting them to complete the questionnaire, recipients were also asked to forward the link to other artistic swimmers in their networks. Two follow-up e-mail reminders were also sent to encourage participation. A total of 202 artistic swimmers from 22 different countries, including Hong Kong (n = 26; 12.9%), England (n = 19; 9.4%), Macau (n = 17; 8.9%), Singapore (n = 14; 7.0%), and Malaysia (n = 9; 4.5%) completed the questionnaire. The majority of participants were women (n = 201; 99.5%) between 18 and 25 years old. In the sport of artistic swimming, many competitions are only open to women, so men tend to be rare in the sport. Of the sample, 119 swimmers (60.8%) had trained for 5 to 10 years, 60 swimmers (29.7%) had trained for 11 to 15 years, and 17 swimmers (9.4%) had trained more than 15 years in the sport of artistic swimming. All participants were fluent in English, as the items on the questionnaire were written in English.

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Following the N:q (the number of parameters in the model) rule of Jackson [48], the sample size (n=202) of this study provided sufficient data for performing covariance based structural equation model analysis.

## MEASUREMENT

Twenty-five items from previously validated instruments were used to measure autocratic coaching style (five items), democratic coaching style (nine items), athletic enjoyment (seven items), intent to continue (one item), and demographic information. The 14 items measuring autocratic and democratic coaching behaviours were adopted from the Leadership Scale for Sports (LSS), developed by Chelladurai and Saleh [27], which had reported reliabilities ( $\alpha$ ) of .66 for autocratic behaviour and .77 for democratic behaviour. Each item began with the statement “my coach...” and included items such as “does not explain his/her action” and “speaks in a manner not to be questioned” for autocratic behaviour and “asks for the opinion of the athletes on strategies for specific competitions” and “lets his/her athletes share in decision-making” for democratic behaviour. The items were scored using five-point Likert-type scales, ranging from 1 (never) to 5 (always). To measure athletic enjoyment, the “interest/enjoyment” dimension from Ryan’s [49] Intrinsic Motivation Inventory (IMI) was used. Sample items for enjoyment included “I thought artistic swimming was a boring activity (Reversed Code),” “I would describe artistic swimming as very interesting,” and “I thought artistic swimming was quite enjoyable.” The items were also scored using five-point Likert-type scales, ranging from 1 (not at all true) to 5 (very true). In addition, a single item “I will continue to participate in artistic swimming” was presented to measure participants’ intent to continue, using a five-point Likert-type scale, anchored by 1 (absolutely not) and 5 (definitely yes). Following an approach used in other research on sport participation (e.g., [50]), the questionnaire included a single item to

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assess intent to continue because the measurement of behavioural intention is sufficiently narrow and unambiguous [51]. The results of a normality test indicated that the ranges of skewness and kurtosis for the 25 items were -1.478 to 0.683 and -1.272 to 2.703, respectively, which indicate a normal distribution [52].

## DATA ANALYSES

First, overall demographic characteristics of participants and descriptive statistics (e.g., means and standard deviations) of variables were analysed. Second, independent t-tests were performed to explore the differences in athletic enjoyment and intent to continue one's athletic career in terms of participants' perceptions of coaching style. Third, a two-step approach was applied to test the hypothesized model [53]. In the first step, the measurement model was examined by conducting confirmatory factor analysis (CFA) and reliability analysis to test validities of the measurement model and reliabilities of the measures. In the second step, the structural model was examined using several model fit indexes. For the statistical analyses, we used AMOS 22.0[54]. In evaluating the measurement and structural models, several model fit indexes – CFI [55], RMSEA [56], and SRMR [57] – were scrutinized. Generally, a CFI value over 0.9 represents an acceptable fit. Regarding RMSEA and SRMR, values lower than 0.08 represent acceptable fits [58]. The chi-square statistic was not used as a main evaluation index because it is highly sensitive to sample size [59]. Therefore, we considered the model fit indexes mentioned above, although we rejected the null hypothesis regarding chi-square (i.e., no difference between the proposed model and the data structure).

## RESULTS

### DESCRIPTIVE STATISTICS AND INDEPENDENT T-TESTS

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Table 1 shows the means and standard deviations for athletic enjoyment and intent to continue by type of coaching style. Among 202 participants, 53 swimmers (26.2%) reported above the midpoint of the scale (3.0) for autocratic coaching style and below 3.0 for democratic coaching style, while 85 swimmers (42.1%) reported above 3.0 for democratic coaching style and below 3.0 for autocratic coaching style. Given the results, 53 swimmers and 85 swimmers were classified, respectively, as the “group with autocratic coaching style” and the “group with democratic coaching style” for the independent t-tests. The results of t-tests revealed significant differences for both enjoyment,  $t(136) = -8.34$   $p < .001$ , and intent to continue,  $t(136) = -9.61$ ,  $p < .001$ , which supported hypotheses 1 and 2. These results suggest that athletes led by coaches with a democratic coaching style reported higher perceived athletic enjoyment and intent to continue their athletic careers than athletes led by coaches with an autocratic coaching style.

[Insert Table 1 about here]

## MEASUREMENT MODEL

The results of an initial CFA showed unacceptable model fits [Chi-square statistic = 757.619,  $df=186$ ,  $CFI=.777$ ,  $RMSEA=.124$ , and  $SRMR=.082$ ]. Thus, we checked squared multiple correlation (SMC) for each item. A total of five items (one for autocratic coaching style and four for athletic enjoyment) were dropped because the SMC values of these items were below .300 [60]. The examples of the items were “Works relatively independent of the athletes” for autocratic leadership and “I thought artistic swimming was a boring activity (Reversed Code)” for athletic enjoyment. After removing those items, the following model fits were extracted [Chi-square statistic = 311.264,  $df=98$ ,  $CFI=.900$ ,  $RMSEA=.091$ , and  $SRMR=.055$ ], which indicated an acceptable fit. Convergent validity was assessed by construct reliability (CR) and average variance extracted (AVE) values. Convergent validity of the measures was

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established because all CR and AVE values were greater than 0.7 and 0.5, respectively [61].

Discriminant validity can be established when squared correlations between the dimensions are lower than AVE values [62]. Thus, discriminant validity was also established because the minimum value of AVE (.558) was higher than the maximum value of squared correlation between dimensions (.495). The results of convergent and discriminant validity are shown in Table 2. With respect to multicollinearity, autocratic leadership and democratic leadership were slightly more highly correlated with each other ( $r = -.704$ ). Based on the criteria of multicollinearity of Tabachnick and Fidell [63], this correlation coefficient would not lead to a severe statistical problem. The results of the correlation analysis are shown in Table 3. In terms of internal consistency, Cronbach's alphas for democratic leadership, autocratic leadership, and athlete enjoyment were .819, .938, and .885, respectively. These coefficients were acceptable [64].

[Insert Table 2 and Table 3 about here]

## STRUCTURAL MODEL

The structural model consisting of autocratic leadership, democratic leadership, athlete enjoyment, and intent to continue was tested using the maximum likelihood estimation method. The model fits of the revised structural model were acceptable [Chi-square statistic = 334.845,  $df = 110$ , CFI = .900, RMSEA = .089, and SRMR = .055]. Figure 1 shows the results of the revised structural model. The results indicated that democratic leadership had a direct positive influence on athlete enjoyment ( $\beta = .428$ ), which supported hypothesis 3a ( $t = 3.106$ ,  $p = .002$ ), while autocratic leadership had a direct negative influence on athlete enjoyment ( $\beta = -.296$ ), which supported hypothesis 3b ( $t = -2.101$ ,  $p = .036$ ). Moreover, democratic leadership did not influence intent to continue ( $\beta = -.104$ ), which did not support hypothesis 4a ( $t = -.794$ ,  $p = .427$ ), whereas



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autocratic leadership had a direct negative influence on intent to continue ( $\beta=-.633$ ), which supported hypothesis 4b ( $t=-4.456$ ,  $p=.000$ ). Last, athlete enjoyment did not influence intent to continue ( $\beta=.159$ ), which did not support hypothesis 4c ( $t=1.658$ ,  $p=.097$ ).

Although the results of the structural model did not support the path between athletic enjoyment and intent to continue, we still tested the mediating effect of athletes between leadership styles and intent to continue in order to examine the internal mechanism among the variables in the proposed model. The bootstrapping method was adopted due to the skewed distribution of standard error about the mediating effect [65]. In this study, 1,000 bootstrap samples were generated using random sampling with replacement from actual data and reported bias-corrected 90% confidence intervals. The results confirmed that the mediating effects of athlete enjoyment between democratic leadership and intent to continue ( $p=.051$ , CI = .004 to .198) and between autocratic leadership and intent to continue ( $p=.127$ , CI = -.177 to .002) were not significant, which did not support hypotheses 5a and 5b. The results of the relationship testing are shown in Tables 4 and 5.

[Insert Figure 2, Table 4 and Table 5 about here]

## DISCUSSION

The main goal of this study was to investigate – based on situational leadership models – the relationships between two types of coaching styles, athletes' level of enjoyment, and their intent to continue their athletic careers. By understanding these relationships, we are able to determine which coaching style is more likely to promote the enjoyment of elite artistic swimmers and increase their intrinsic motivation to continue the sport. Based on situational leadership theories and relevant research on the relationships between coaches and athletes, nine research hypotheses were proposed, and five hypotheses were supported. Therefore, the results

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of this study yield insight into the impact of coaching style on the attitudinal and behavioural outcomes of elite athletes with maturity (i.e., ability and willingness to learn skills and complete tasks) and provide important practical implications for their coaches and sport organizations.

The results of descriptive statistics indicate that elite artistic swimmers reported average scores of 4.28 for enjoyment in the sport, 3.82 for intent to continue, 2.64 for autocratic style, and 2.76 for democratic style (on a 5-point scale). The results of the two outcome variables were somewhat satisfactory because the midpoint of the scales was 3.00. In this study, a t-test was performed to identify the differences in athlete enjoyment and intent to continue in terms of two leadership styles. The results revealed that the elite artistic swimmers led by the coaches with a democratic style reported significantly higher enjoyment levels and intent to continue than the swimmers led by coaches with an autocratic style. In light of this finding, it is worthwhile to consider that situational leadership models stress adaptability as a critical aspect of becoming an effective leader [18, 19, 22]. However, 26.2% (n = 53) of 202 participants in the current study perceived their coaches as autocratic and reported an intent to continue that was below the midpoint. This finding highlights the potential negative relationship between autocratic leadership and intent, which is consistent with the association between autocratic/authoritarian coaching style and athletes' low enthusiasm, poor performance, and dropout [66]. Chelladurai's [27] MML proposes that performance (and enjoyment) will be maximized when actual coaching behaviors are consistent with athletes' preferences, which are influenced by situational characteristics, such as (a) large or small groups, (b) elite or recreational sports, (c) individual or team sports, (d) the relative importance of competition, and (e) home or away events. Therefore, in order to adopt an appropriate style that suits the situation appropriately (e.g., a style tailored to

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the athletes' ability and willingness), coaches should be aware of their coaching styles and how their coaching behaviors are perceived by their athletes.

In addition, there are two meaningful findings from the SEM analysis that we highlight here. First, democratic coaching style had a positive influence on athlete enjoyment. This result is consistent with existing research [67, 68]. Barnett, Smoll, and Smith [69] proposed that athletes who show a positive attitude toward coaches have a higher level of enjoyment in their sport. Because democratic-style coaches tend to provide more positive feedback to their athletes and invite them to actively participate in training and game strategies, athletes working with such coaches tend to feel more involved as members of the team [70]. The findings of the current study are further supported by Marcone [13], who proposed that democratic-style coaches allow athletes to be self-determined, whereas autocratic-style coaches tend to foster externally motivated athletes in a non-self-determined fashion. The participants in the current study were elite artistic swimmers who possessed high-level skills and mental strength. Kerr, Barker-Ruchti, Schubring, Cervin, and Nunomura [71] argued that coaches should adapt their coaching style for older, top-level gymnasts, as a democratic coaching style is likely to be more effective with an experienced group. The findings of the current study support this argument. The experienced elite artistic swimmers (i.e., a closed-skill sport) favoured a democratic coaching style and showed higher levels of enjoyment and intent to continue when they had coaches with a democratic coaching style.

Second, autocratic leadership had a direct negative influence on both athletic enjoyment and intent to continue. Isoard-Gauthier, Descas, and Lemyre [72] proposed that controlling coaching styles may increase the risk of young elite handball players burning out and dropping out of the sport, as compared to autonomy supportive coaching styles based on self-

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determination theory [73]. According to Adair [74], an autocratic coaching style could be preferred and effective when straightforward directions are needed and quick and immediate decisions are required to fulfil short-term goals. However, such a style may ignore athletes' personal feelings and values and introduce tension between coaches and athletes due to a lack of interpersonal communication [75]. In the current study, autocratic coaching had a direct negative impact on the intent to continue for the elite artistic swimmers—a group that is highly capable and committed to their sport. Therefore, coaches at the elite level should be particularly cautious when engaging in autocratic coaching behaviours.

The absence of a direct effect of athletic enjoyment on intent to continue is a somewhat unexpected finding, as athletic enjoyment has been meaningful for predicting continued sport participation in other contexts, such as youth sport [41, 42]. However, the current study focused on elite-level athletes. Whereas young athletes who are in the early stages of involvement in a sport may be highly influenced by enjoyment, elite athletes, who have a high level of involvement and commitment to a sport, may be more affected by other factors. At the elite level, sport often becomes “like a job,” so enjoyment may not be a primary factor influencing elite athletes' decisions [76]. In the current study, participants consisted of elite athletes who have devoted countless hours to their sport over years of their lives and achieved experience competing at international-level events. Previous studies have examined individual (e.g., fun, enjoyment, and physical competence), social (e.g., coaches, peers, and parents), structural, and organizational factors that influence participation and dropout among sport participants [77]. The lack of a direct relationship between enjoyment and intent to continue participation in the current study, therefore, may provide insight about the relative importance of such factors based on the level of sport competition.

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### PRACTICAL IMPLICATIONS

The findings of the current study confirmed that coaching style is likely to have a significant influence on athletes' attitudinal and behavioural outcomes. Because athletes—especially elite athletes—and coaches spend large portions of time together in training and at competitions, it is important for coaches and sport administrators to fully understand what type of coaching style should be used to enhance athletes' enjoyment and influence their behaviours.

The results of the current study have important implications for sports managers. First, coaches should be aware of the importance of coaching style in leading athletic teams. Likewise, coaches must recognize what their coaching style is and whether their style is the most effective way to achieve the team's goals based on their athletes' readiness. Each coaching style has advantages and disadvantages, and coaches should utilize appropriate styles to suit their situations and needs. According to Vroom and Yetton [78], autocratic leadership can be emphasized when a leader has abundant information or the quality of decision making is important. A democratic-style coach, unlike an autocratic coach, will not give unilateral orders and instructions but will clearly communicate reasons for giving instructions and seek athletes' views [26]. Elite artistic swimmers need to train the same routine hundreds or even thousands of times, even though they are experienced and committed to the sport. Such conditions may lead to become boredom in training and compromise their concentration. If a coach does not explain why his or her artistic swimmers need to repeat certain trainings, athletes may be more likely to feel unmotivated and easily exhausted. Therefore, coaches should provide more opportunities for artistic swimmers to share their opinions in determining their routines as well as rational explanation for annual or seasonal training plans, which can help the athletes understand what and why they are training for [79].

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Second, coaches should also know that their coaching style affects how their athletes perceive their coaching behaviour. A democratic-style coach will allow athletes to freely express their feelings and opinions regarding training, which will foster empowerment in their sport. Sometimes athletes feel that they cannot change unreasonable situations (e.g., training programmes, coaching styles, competition strategies, sports systems, etc.) and choose to drop out of sports because of their sense of helplessness. In many cases, coaches may not be aware of their athletes' psychological state or cannot afford to pay attention to their psychological wellbeing because they are under extreme pressure to win [1, 80]. Some less experienced coaches may not know how to communicate with athletes effectively. Therefore, sports organizations should provide coaches with proper education and support to address these situations—as guardians, not coaches—and form strong relationships through interpersonal communication.

## FUTURE RESEARCH

While the current study expands the existing literature on coaching styles by exploring the relationships between coaching styles and athletes' enjoyment and intent to continue at the elite level, there is still a need for further research exploring coaches' leadership styles and other relevant variables in sport. First, future studies should collect more data to investigate the proposed relationships from the current study. Although the mediating effect of athlete enjoyment between democratic leadership and intention to continue ( $p=.051$ ,  $CI = .004$  to  $.198$ ) were not supported in this study with 202 participants, it is possible the indirect relationship could have been supported with a larger sample. Second, future studies should investigate additional moderating variables, such as age, gender, cultural background, length of training period, and training level in the relationship. Third, future studies should utilize potential

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mediators or outcomes, such as parental perception and satisfaction with coaching styles, team commitment, and organizational citizenship behaviours. For instance, parents may influence athletes' perceptions and experiences of coaching styles or behaviors, which could eventually lead to their career decisions, such as continuing participation or withdrawing from a sport [81, 82]. Fourth, future studies should examine the relationships between leadership styles and relevant outcomes in terms of different groups (e.g., inexperienced vs. experienced, open-skill sports vs. closed-skill sports, recreational sports vs. competitive sports, or amateur vs. professional) of athletes and diverse sports with larger samples. Fifth, the absence of a significant relationship between enjoyment and intent to continue participation at the elite level merits further research to examine the relative importance of various factors that may influence continued sport participation or dropout at different levels of competition. Finally, future studies should include qualitative approaches, such as individual interviews, for more in-depth insight into the coach–athlete relationship.

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Table 1. Means and Standard Deviations of Athletic Enjoyment and Intent to Continue by Type of Leadership Style

	Type of Sports			
	Autocratic (n=53)		Democratic (n=85)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Athletic Enjoyment	3.76	.74	4.60	.44
Intent to Continue	2.72	1.50	4.55	.66

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Table 2. Convergent and Discriminant Validity

Items	$\lambda$	CR	AVE
Autocratic Leadership		.860	.607
▪ Does not explain his/her action	.737		
▪ Refuses to compromise a point	.634		
▪ Keeps to himself/herself	.774		
▪ Speaks in a manner not to be questioned	.746		
Democratic Leadership		.919	.558
▪ Ask for the opinion of the athletes on strategy for specific competitions	.792		
▪ Gets group approval on important matter before going ahead	.750		
▪ Let's his/her athletes share in decision making	.830		
▪ Encourages athletes to make suggestions for ways of conducting practices	.829		
▪ Let's the group set its own goals	.791		
▪ Let's the athletes try their own way even if they make mistakes	.736		
▪ Asks for the opinion of the athletes on important coaching matters	.803		
▪ Let's athletes work at their own speed	.754		
▪ Let's the athletes decide on the plays to be used in a game	.832		
Athlete Enjoyment		.818	.601
▪ I enjoyed doing artistic swimming very much	.773		
▪ Artistic swimming did not hold my attention at all (R)	.694		
▪ I would describe artistic swimming as very interesting	.659		

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Table 3. Correlation Analysis

	1	2	3	4
1. Democratic Leadership				
2. Autocratic Leadership	-.691***			
3. Athlete Enjoyment	.585***	-.522***		
4. Intent to Continue Athletic Career	.491***	-.594***	.453***	

\*\*\* $p < .001$

Note. The elements on the matrix diagonal is 1. The correlation coefficients are all statistically significant, and they all have values of  $\pm 0.4$  or higher, so all variables have strong relationship.



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Table 4. Direct Effect Testing

	b	se	$\beta$	t	p
Democratic Leadership → Athletic Enjoyment	.295	.095	.428	3.106	.002
Autocratic Leadership → Athletic Enjoyment	-.198	.094	-.296	-2.101	.036
Democratic Leadership → Intent to Continue Athletic Career	-.149	.188	-.104	-.794	.427
Autocratic Leadership → Intent to Continue Athletic Career	-.886	.199	-.633	-4.456	.000
Athletic Enjoyment → Intent to Continue Athletic Career	.332	.201	.159	1.658	.097

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Table 5. Indirect Effect Testing

	$\beta$	Bootstrap SE	90%CI	p
Democratic Leadership → Athletic Enjoyment → Intent to Continue Athletic Career	.068	.053	.004/.198	.051
Autocratic Leadership → Athletic Enjoyment → Intent to Continue Athletic Career	-.047	.052	-.177/.002	.127