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The Impact of Congruence between Perceived and Preferred Leadership on Satisfaction among  
College Student-Athletes in Singapore

## Abstract

Chelladurai (1978) developed the Multidimensional Model of Leadership, which was designed to be situation-specific to examine leadership behavior and effectiveness in sporting contexts.

Applying Chelladurai's concept to the Singapore sporting context, this study aimed to assess the impact of congruence between perceived and preferred leadership behaviors on satisfaction with leadership among college student-athletes in Singapore. Data were collected from 185 college student-athletes enrolled in the five local tertiary institutes. The questionnaire utilized in this study consisted of the perception and preference versions of the Revised Leadership Scale for Sports (Zhang, Jensen, & Mann, 1997) and seven items measuring satisfaction with coaching leadership (Chelladurai et al., 1988). Confirmatory factor analysis and a series of hierarchical multiple regression procedures were carried out to test the psychometric properties of the leadership scale and the hypothesized relationship between congruence levels and satisfaction. Results revealed congruence of perceived and preferred behavior in social support was a significant indicator of athletes' satisfaction. Possible implications from the findings were discussed in an effort to better understand coaching effectiveness in Singapore.

**Keywords:** coaching leadership behavior, satisfaction, congruence, multidimensional model of leadership

## Introduction

Singapore is a typical diversified society featuring a variety of identities. The harmony of the populations while respecting and maintaining its multi-racial, multi-cultural, and multi-religious dispositions has been the paramount concern of the government since its independence. One of the significant strides Singapore has taken toward building a common identity is to develop a strong sport system that caters to all needs (Aplin, Quek, & Kunalan, 2009). Singapore has increasingly emphasized sport as a significant platform that unites the nation as one, playing a pivotal role in the nation's continuous strive for excellence by breaking down barriers (Singapore Sports Council, 2011). With the emphasis from the government in making a name for Singapore in the sporting world, there have been pertinent efforts to develop various managerial strategies contributing to the success of sport in the nation. One such suggestion proposed by the Sporting Culture Committee in 2008 was to produce qualified coaches in various sports at the elite and recreational levels (Ministry of Community, Development, Youth and Sports, 2008). For instance, the National Coaching Accreditation Programme, consisting of three learning levels of theory and technical components, serves as the national standard for coaching qualification as well as a form of quality assurance to the general public.

While such standardizations of the coaching qualification help coaches attain their coaching skills and techniques (Singapore Sports Council, n.d.), it may not yield crucial knowledge about identification and evaluation of coaching behavior. Furthermore, little emphasis has been placed on research with regard to leadership behavior and its consequences (e.g., maximization of athlete performance and satisfaction), particularly in the Singapore sport setting. To extend knowledge of leadership in sport, this study seeks to explore Singapore coaches' leadership behavior, which in turn determines the effectiveness of coaching. Leadership

behavior demonstrated by coaches plays a crucial role in influencing the psychological, emotional, and physical effects of sport involvement, and hence is identified as a main factor for the success or failure of an athlete or a sport team (Reinboth, Duda, & Ntoumanis, 2004). As such, having a greater understanding of leadership behaviors would not only develop better relationships between coaches and athletes but also identify desirable behaviors for more effective sport education and a higher level of coaching professionalism.

In the context of sport and exercise, the effectiveness of coach's leadership is often measured by several components, such as individual athletes' performance, team performance, or athletes' satisfaction level (Weiss & Friedrichs, 1986). Chelladurai (1978) conceptualized the Multidimensional Model of Leadership (MML), the most popular interactional approach to leadership, to specifically examine leadership behavior and effectiveness in coaching. In the MML, Chelladurai (1978) proposed an athlete's satisfaction and performance are dependent on the interactions among three aspects of coaching leadership behavior. Drawing an idea from the MML approach, the primary purpose of this study was to examine the impact of congruence between perceived and preferred leadership behavior among college student-athletes on their satisfaction with leadership. Further details regarding the conceptual background and its application to the current research are addressed in the following section.

### Theoretical Framework

Leadership generally refers to "the behavioral process of influencing individuals and groups toward set goals" (Barrow, 1977, p. 232). Within the same vein, DuBrin (2003) described leadership as "the ability to inspire confidence and support among the people who are needed to achieve organizational goals" (p. 286). Being posited as a major determinant of organizational goals such as member's performance and success, the concept of leadership has been extensively

studied and documented in the existing literature. Earlier research on leadership revolved from the assumption that, unlike non-leaders, leaders possess innate traits and characteristics that account for their effectiveness and success (e.g., Stogdill, 1948, 1974). However, this trait approach has been considered unsuccessful in explaining the influences of such traits on members' satisfaction and performance (Weinberg & Gould, 2007). That is, the failure of trait theories to explain variance from one situation to another resulted in a shift of attention to studying behaviors of leaders. A behavioral approach assumes that certain behaviors and styles of leaders are an important determinant of effective leadership, and a good relationship between leaders and members is a key factor in increasing the effectiveness of organizations (e.g., Fleishman & Harris, 1962; Misumi & Peterson, 1985). Still, a major limitation of this approach is the failure to take into account the importance of the situation and its influences and interactions with the members involved. As a result, recent leadership theories and models have acknowledged the importance of situational consideration and predicted that the effectiveness of a leader can vary depending on his/her traits, characteristics of the members, as well as the level of control of various situational factors (e.g., Fielder, 1967; Hersey & Blanchard, 1982; House, 1971). This situational approach has been also widely applied in understanding the effectiveness of coaching leadership in different sport settings.

#### *Multidimensional Model of Leadership in Coaching*

The situational approaches such as the contingency theory (Fielder, 1967), the path goal theory (House, 1971), and the situational leadership model (Hersey & Blanchard, 1982) subsequently formed the foundation of the MML. Unlike other situational theories, the MML proposed by Chelladurai (1978) is situation-specific to athletics and, hence, addresses the unique characteristics of sport to examine the behavior and effectiveness of coaches. The MML

emphasizes the congruence among three different leadership behavior states: required, actual, and preferred (Chelladurai, 1978). As defined by Chelladurai (1993), required behavior refers to the way in which the leader has to behave due to situational demands and constraints such as the team's organizational structure, social norms or government regulations. In addition, actual behavior, hereafter referred to as perceived behavior, refers to the behavior actually exhibited by the leader (Chelladurai, 1993). This behavior, however, is not solely based on his/her individual personality traits, but instead, dependent on ability, experience, and other situational factors (Chelladurai, 1993). For instance, a leader would exhibit different behaviors when coaching in a primary school team as opposed to coaching in a college team due to different organizational goals and athlete maturity. However, there is also the possibility that two different coaches may show very different behaviors although they both coach in primary level teams due to their different personalities or philosophies. Lastly, preferred behavior is highly dependent on the athletes and their associated needs and goals (Chelladurai, 1993). Chelladurai concluded that team performance and athlete satisfaction are jointly "a function of the congruence among three states of leader behavior: required, preferred, and actual [i.e., perceived]" (Chelladurai, 1993, p. 647).

However, it should be noted that the central thrust of this study was to examine student-athletes' perceived and preferred leadership behavior, rather than the required behavior imposed by organizations or environment. While the two consequences, performance and satisfaction, are not independent of each other, satisfaction is associated with the congruence between perceived and preferred leader behavior, whereas performance is linked to the congruence between required and perceived leader behavior (Chelladurai, 1978). This implies that a match between the athletes' needs and desires and the behavior demonstrated by the leader is likely to result in

an increase in the athletes' satisfaction level. In addition, Chelladurai and Riemer (1997) noted the satisfaction level of an athlete is a better indicator of a leader and organization's effectiveness as compared to performance outcomes due to several factors. Firstly, performance outcomes can also be influenced by external factors such as weather, luck, incorrect calls by referees, or the opponent's performance (Chelladurai & Riemer, 1997). Second, winning is denied to at least one contestant in every competition; thus, it is not fair to evaluate the effectiveness of the leader based solely on wins and losses (Chelladurai & Riemer, 1997). Lastly, the fact that the amount of training time is disproportionate to that of the actual competition implies that an evaluation based on performance outcomes does not take into account the entire athletic experience (Chelladurai & Riemer, 1997). Considering the conceptual and empirical justifications (e.g., Chelladurai, 1984; Chelladurai & Riemer 1997), this study examined satisfaction with leadership as a consequence of leadership behavior.

#### *Satisfaction with Leadership*

Athlete satisfaction refers to “a positive affective state resulting from a complex evaluation of the structure, processes, and outcomes associated with the athletic experience” (Chelladurai & Riemer, 1997, p. 135). Athlete satisfaction is a multi-faceted consequence of the MML, and thus, it is plausible that athletes could be satisfied with different aspects of leadership provided by the coach (Chelladurai, Imamura, Yamaguchi, Oinuma, & Miyauchi, 1988). In a study involving leadership and satisfaction among Japanese and Canadian athletes, Chelladurai and colleagues (1988) utilized two satisfaction dimensions, satisfaction with leadership and personal outcome. They found Japanese and Canadian athletes did not associate their coaches' leadership with the satisfaction level of their personal outcome. This finding was similar to the results of an earlier study conducted by Chelladurai (1984) which found no relation between

satisfaction with individual performance and the discrepancy between preferred and perceived leadership behavior. Possible explanation on the lack of this association included the manner in which personal outcomes/goals were determined as well as the influence the coach had in achieving these outcomes (Chelladurai, 1984). Personal goals, unlike team ones, are created by the individuals themselves, and the probability of success is normally based on past success or failure as well as the individual's own assessment of his/her skill level (Chelladurai, 1984). As a result, the role of the coach is only peripheral, and individuals have a lower tendency of associating the coach's leadership behavior with their level of performance satisfaction. Therefore, the dimension of satisfaction with personal outcome was not considered in this study. Based on the aforementioned conceptual backgrounds, the study hypothesized a positive impact of congruence between perceived and preferred leadership behaviors on satisfaction with coaching leadership.

## Method

### *Participants*

The population for this study consisted of college student-athletes in Singapore. Using a convenience sampling method, 188 student-athletes attending five tertiary institutes in Singapore (i.e., Nanyang Technological University, National University of Singapore, Singapore University of Technology and Design, Singapore Institute of Technology, and Singapore Institute of Management) were recruited for this study. **The sample was deemed representative of the research population as the data were collected from the annual university competitions in which all five tertiary institutes in Singapore participated.** The research questionnaire and procedures were cleared by the Ethical Review Committee from the affiliated university of the researchers. Team captains or coaches of the respective sports were contacted by one of the researchers to



obtain permission to attend their training sessions. The researcher attended the training sessions, briefly explained the purposes of the study, and distributed the questionnaires to those willing to participate in the study. The participants were informed that there were no right or wrong answers, assured of the confidentiality of their responses, and encouraged the participants to ask questions if necessary. The participants were also informed that they were allowed to withdraw from taking part in the study at any time. After discarding three incompletely or insincerely responded questionnaires, a total of 185 questionnaires were utilized for the study.

The participants consisted of 80 males (43.2%) and 105 females (56.8%), representing their colleges in 22 different sports, such as ultimate frisbee (20.0%), netball (17.8%), handball (13.5%), soccer (13.0%), dragon boat (10.8%), floorball (7.6%), softball (3.8%), water polo (3.2%), badminton (2.2%), and the like. **There was a balanced mix of sports type (e.g. invasion, net/wall, striking/fielding as well as rowing) in this sample representing the population of college athletes in Singapore. In addition, for sports with mixed genders (e.g. ultimate frisbee) and those with female and male teams (e.g. handball, soccer), responses from both genders were collected.** In terms of student status, 35.7% were sophomores, followed by freshmen (25.4%), juniors (21.1%), and seniors (9.7%). Racially, a large majority of the respondents was Chinese (93.0%), followed by Indians (3.2%) and Malays (2.2%). The participants' sports experience ranged from three months to 230 months ( $M = 60.97$ ;  $SD = 45.92$ ).

### *Instrument Development*

The six-dimensional Revised Leadership Scale for Sport (RLSS; Zhang, Jensen, & Mann, 1997), which was modified from the Leadership Scale for Sport (LSS; Chelladurai and Saleh, 1980), was used in this study. The original LSS (Chelladurai & Saleh, 1980) contains 40 items measuring five dimensions of leadership behavior: training and instruction behavior (13 items),

democratic behavior (nine items), autocratic behavior (five items), social support behavior (eight items), and positive feedback behavior (five items). However, the vast majority of coaching leadership research failed to find support for the internal consistency of the autocratic behavior dimension, while the other four dimensions were deemed reliable (e.g., Chelladurai & Carron, 1981; Chelladurai & Saleh, 1980; Kwon, Pyun, & Kim., 2010).

Recently, there has been a new attempt to overcome this reliability issue concerning autocratic behavior (e.g., Kwon et al., 2010; Kwon, Pyun, Han, & Ogasawara, 2011). Kwon et al. (2010) found the internal consistency of the five autocratic items were extremely low ( $\alpha = .47$ ) and, consequently, did not consider this dimension in their study. The justification for this removal was derived from the notion that both autocratic and democratic behaviors are related to a leader's decision-making styles and placed on two opposite ends in a decision-making continuum (Chelladurai & Arnott, 1985). Given the continuum representing 100 percent influence for autocratic behavior and zero percent influence for democratic behavior in a coach's decision-making impact, the use of only democratic behavior is thus still able to measure a leader's decision-making style (Chelladurai & Arnott, 1985). The subsequent study (Kwon et al., 2011) provided additional empirical evidence supporting the psychometric properties of this four-dimensional LSS scale. Kwon et al.'s (2011) multigroup invariance test showed configural, metric, scalar, and factor variance-covariance invariance in the modified LSS across middle and high school Japanese student-athletes.

However, one of the significant weaknesses of the four-dimensional LSS (Kwon et al., 2010, 2011) is that it failed to consider various situational factors coaches and athletes can face during practices and competitions. According to Zhang et al. (1997), situational consideration behavior refers to "proper coaching behaviors aimed at considering the situation factors (such as

the time, individual, environment, team, and game); setting up individual goals and clarifying ways to reach the goals; differentiating coaching methods at different stages; and assigning an athlete to the right game position” (pp. 109-110). In addition, regarding the shortcoming associated with autocratic behavior, Chelladurai and Riemer (1998, p. 239) noted that the original items in autocratic behavior were not homogeneous and needed to be revised to reflect the concept of autocratic behavior, “the opposite end of the continuum from democratic behavior,” by including several new items. With consideration of these issues, Zhang and his colleagues (1997) developed a new scale, namely the Revised Leadership Scale for Sports.

Therefore, the current study utilized the RLSS (Zhang et al., 1997) to measure Singapore coaches’ leadership styles. This scale consists of six factors with 60 items including situational consideration behavior in addition to the original five factors. Like Chelladurai and Saleh’s (1980) LSS, there are still three different versions of the revised LSS, namely athlete perception (how the athletes perceive their coach’s behavior), athlete preference (how they want their coach to behave), and coach perception (the actual behavior as evaluated by the coach themselves). In this study, athlete perception and preference were assessed for the purpose of the current investigation. In the perception version of the revised LSS, the items were prefaced by the statement, “My coach...” while the preference version used the phrase, “I prefer my coach to...” preceding each statement. All items were measured by a 5-point Likert scale, anchored with “strongly disagree” (1) and “strongly agree” (5).

For the measurement of satisfaction with coaching leadership, participants were required to complete the seven items, proposed by Chelladurai et al. (1988), using a 7-point Likert scale which used the anchors from “very dissatisfied” (1) to “very satisfied” (7). **The construct of satisfaction is often considered multidimensional, representing several unique facets of athletics**

(Chelladurai & Riemer, 1997). For instance, Riemer and Chelladurai (1998) developed the 15-dimensional construct of athlete satisfaction with 56 items. While some subscales capture certain aspects of leadership (Riemer & Chelladurai, 1998), this scale requires a lengthy survey instrument. Unlike other surveys conducted in calm classrooms, we visited the athletes' training or competition venues where most of the games were conducted in outdoor settings and distributed the questionnaires right after the competitions and the trainings. It was presumed that such a lengthy questionnaire might have led to a poor response rate. More importantly, this study was concerned with athlete satisfaction with the coach's leadership only. Therefore, the global measure of athlete satisfaction with leadership developed by Chelladurai et al (1988) was regarded more suitable for the current research design. In addition, the questionnaire included a section to measure demographic information of the participants, such as gender, race, and sports played as well as their competitive experience in terms of the number of years of representation.

#### *Data Analysis*

The data were analyzed using the Statistical Package for the Social Sciences (SPSS 21.0) and LISREL 8.80. As a preliminary stage, descriptive statistics were utilized to inspect any outlier or invalid data and test the assumption of normality of the distributions of all observed variables using skewness and kurtosis values. Next, two confirmatory factor analyses (CFAs) were carried out to test the psychometric properties of the two versions of the RLSS measurement models independently in terms of overall goodness-of-fit, reliability, and validity. Lastly, Pearson's correlation coefficients (Gravetter & Wallnau, 2000) between satisfaction and 12 perceived/preferred behavior factors were calculated. Twelve hierarchical multiple regressions (two sets of six multiple regressions) were then employed to test the hypothetical relationships between congruence of perceived and preferred leadership behavior and student-athletes' overall satisfaction with coaching leadership.

In the first set, six multiple regressions were conducted by entering each preference score first, followed by the perception and the interaction scores. In the second set, the other six multiple regression procedures were carried out with the same way, except the reversed order of the preference and perception entries, followed by the interaction scores. This technique of analysis has been popularly utilized in past studies (e.g., Courneya & Chelladurai, 1991; Riemer & Chelladurai, 1995; Riemer & Toon, 2001) as it can examine “the cumulative and unique variance in satisfaction explained by the main effects of preference for and perceptions” (Riemer & Chelladurai, 1995, p. 284) of each of the six leadership behaviors and their congruence. Therefore, the congruence effect can be supported if the change in  $R^2$  ( $\Delta R^2$ ) in the effect of the interaction is significant. An adjusted alpha value of .004 (.05/12) was applied to ensure that the overall risk or familywise error rate for all tests remained .05.

## Results

### *Preliminary Analysis*

The data were screened for the purposes of inspections of problematic observations, normality of variables, and internal consistency among the respective items. Descriptive statistics revealed no outliers, invalid data, or input errors. A few missing values were replaced with mean scores of the other items in their respective dimensions (Afifi & Elashoff, 1966). For the assessment of univariate normality of the measures, skewness and kurtosis statistics were scrutinized. In the RLSS, skewness and kurtosis statistics ranged from -1.65 to 1.22 and from -0.86 to 3.88, respectively, in the perceived version, and from -1.29 to 1.33 and from -0.82 to 3.40, respectively, in the preferred version (see Table 1). In the satisfaction measures, skewness ranged from -.1.65 to -1.22, and kurtosis ranged from 2.17 to 3.33 (see Table 1). All measures were deemed to be normally distributed (Kline, 1998). For the internal consistency tests among the

respective measures, Cronbach's alpha scores and item-to-total correlation coefficients were calculated. Initial reliability tests revealed that all Cronbach's alpha values were greater than the .70 cut-off in both versions (Hair, Black, Babin, Anderson, & Tatham, 2005). However, one item-to-total correlation coefficient (i.e., item 7 in social support) in the perceived version was less than the suggested threshold of .50 (Bearden, Netemeyer, & Teel, 1989). This problematic item was removed from further analysis. The Cronbach's alpha value of .88 for perceived social support in Table 1 improved to .89 after recalculation, and the remaining 119 items were subjected to further analyses.

### *Measurement Model Testing*

Two CFAs were conducted to test the psychometric properties of both measurement models of the perceived and preferred versions independently. Factor loadings, the average variance extracted (AVE) values, and absolute and comparative model fit indexes were calculated and summarized in Table 2. First, in terms of the goodness-of-fit of the model, both measurement models fit the data quite well, meeting the criteria suggested by Kline (1998). Second, for measurement of the adequacy of internal structure of the models, reliability using AVE, convergent validity using factor loadings, and discriminant validity using AVEs and factor correlations were tested. AVEs ranged from .53 to .62 for the perceived scale and from .49 to .68 for the preferred scale, showing lack of reliability of teaching and instruction in the preferred scale. It indicated the factor of teaching and instruction had more variance derived from measurement errors than the variance explained by the factor (Fornell & Larcker, 1981). In regards to convergent validity, several items had loadings less than .707 (Kline, 1998), indicating these items contained more unique variance than common variance. Lastly, all factors seemed discriminate except teaching and instruction and situation consideration in the perceived version

and teaching and instruction, positive feedback, and situational consideration in the preferred version. The squared correlation (.66) between teaching and instruction and situation consideration was greater than the AVE (.57) of teaching and instruction and the AVE (.62) of situation consideration in the perceived version. In the preferred version, the squared correlation (.55) between teaching and instruction and situation consideration was greater than the AVE (.49) of teaching and instruction, and the squared correlation (.58) between positive feedback and situation consideration was greater than the AVE (.55) of positive feedback.

### *Hypotheses Testing*

The proposed relationships between the leadership congruence levels and student-athletes' satisfaction were tested using a series of hierarchical multiple regression analyses. Results from the regressions are summarized in Table 3. First, the bivariate correlation tests revealed significant associations between satisfaction and all six behavior factors ( $r = -.44 \sim .61$ ) in the perceived version but only social support ( $r = .21$ ) in the preferred version at the adjusted alpha of .004. Then, a series of multiple regressions was employed. For each of the behavior factors, two regressions were conducted by entering the order of preference, perception, and preference X perception scores in one regression, and by entering the order of perception, preference, and perception X preference scores in the other regression. Table 3 shows the total explained variance in satisfaction ranged from 21.6% (both democratic and autocratic behaviors) to 38.5% (teaching and instruction), indicating that the equations for all leadership behavior factors were significant at the alpha of .004. A comparison of the variance explained by the two states of behavior in both initial and reverse orders showed that perceptions scores were dominant across all leadership behavior variables. The results from testing the interaction effects supported that

satisfaction is dependent on the interaction between preferred and perceived leadership in case of social support only (See Table 3).

### Discussion

The current study showed a similar but distinct pattern of results compared to Riemer and Chelladurai (1995). In Riemer and Chelladurai's (1995) study, dominant determinants of athletes' satisfaction were mixed. For example, perception scores dominated the relationship between leadership and satisfaction in terms of training and instruction and positive feedback, whereas preference scores dominated in case of social support (Riemer & Chelladurai, 1995). However, the current study reported that perception scores dominated the relationship between leadership and satisfaction in all six behavioral dimensions. None of the preference score in six dimensions was found statistically significant at the alpha level of .004, contributing no additional explanation on satisfaction. This can be interpreted that Singaporean collegiate athletes' satisfaction was mainly determined by their perceptions rather than preferences.

As mentioned by Chelladurai (1993), a match between the athletes' preferences and the leadership behavior exhibited by the coach is likely to increase their satisfaction level. In line with this proposition, the study examined the impact of congruence between perceived and preferred leadership behavior of six dimensions (i.e., teaching and instruction, democratic behavior, autocratic behavior, social support, positive feedback, and situation consideration) on the satisfaction of college student-athletes in Singapore. Of the six dimensions examined in the present study, congruence between perceived and preferred leadership behavior specific to social support was significant in determining the satisfaction level of athletes. This result can be aligned with the result of Riemer and Chelladurai (1995). Although they used the original LSS, they also found that social support was the only behavioral dimension that predicted member



satisfaction. This phenomenon can be explained with the fact that elite athletes are bound to spend significant amount of time with their coaches. As found in past literature (Johnson et al., 2008; Morgan & Giacobbi, 2006), while providing high quality training programs is supposed to be important for a coach, the results also evidenced that providing tangible support and building a good relationship with athletes are required tasks for a coach. Howard-Hamilton and Sina (2001) addressed that, besides the athlete's teammates, the coach plays an important role in an athlete's life and thus, holds a great degree of influence over the athlete's level of satisfaction and enjoyment among elite sport context. Due to the requirements associated with being an athlete such as long hours of training sessions, competitions, training trips, and team meetings, athletes tend to form a strong emotional attachment with their coaches over time (Howard-Hamilton & Sina, 2001). Further, Chelladurai (1978) mentioned that longer periods spent at training are an indication of a greater intensity of involvement, which in turn, translates to a concomitant neglect of external social interactions. Consequently, the athletes' "sources of satisfaction of social needs are restricted to the members of the athletic team of whom the coach is a significant source," providing a possible explanation for the observed results (Chelladurai, 1978, p. 133). Therefore, at a collegiate level, if coaches provide the desired level of social support through their coaching behavior, they are thus able to influence the athletes' satisfaction level and, indirectly, their performance outcome.

While this study found that the congruence of perceived and preferred leadership in social support influenced the level of satisfaction among collegiate athletes in Singapore, past empirical studies found different patterns (e.g., Andrew, 2004, 2009; Riemer & Toon, 2001). For example, Andrew (2009) found that the congruence in training and instruction and autocratic behavior influenced athletes' satisfaction. Another empirical study of Riemer and Toon (2001)

found no support at all for the congruence hypotheses. The different results from the current study and the past investigations (Andrew, 2004, 2009; Riemer & Toon, 2001) can be attributed to cultural differences and different sports recruited. However, Andrew (2009) and Riemer and Toon (2001) both used collegiate tennis players in the United States and found different results. Riemer and Toon (2001) highlighted that “it may be that when preferences account for more variance in satisfaction than perceptions, the congruence hypothesis will be supported” (p. 251). In the results of Riemer and Toon (2001), it was clear that more variance in satisfaction was explained by perceptions rather than preferences. According to the results of Andrew (2009), however, only limited cases of congruence hypotheses were supported even when most of the variance in satisfaction was accounted for by preferences rather than perceptions. Based on the comparison between Riemer and Toon (2001) and Andrew (2004; 2009), it is not always the case that the congruence hypotheses are supported when preference scores account for more variance in satisfaction.

Although it was clearly noted in Riemer and Chelladurai (1995, p. 280) that the “central thrust of the Multidimensional Model of Leadership is that the congruence of perceived and preferred leadership enhances member satisfaction,” the empirical results of previous studies (i.e., Andrew, 2004, 2009; Riemer & Chelladurai, 1995; Riemer & Toon, 2001) and this study as well indicated that it is not always the case. Even the congruency hypothesis was only supported in the case of social support, the satisfaction level in Riemer and Chelladurai (1995) and the current study were very high. The mean values of the leadership satisfaction were 6.15 ( $SD = 1.07$ ) and 5.79 ( $SD = 1.06$ ), respectively, for Riemer and Chelladurai (1995) study and the current study. Based on the empirical results, it is necessary to reconsider the importance of congruence between perception and preference in leadership behaviors. Another empirical evidence for the

suggestion is that, as noted in the beginning of the discussion, perception scores in the six behavioral dimensions dominated the relationship between leadership and satisfaction. No preference score was found to be the determinant of leadership satisfaction in the current study.

In the previous literature regarding the LSS, many empirical studies reported low internal consistency in autocratic behavior dimensions (Chelladurai & Carron, 1981; Chelladurai & Saleh, 1980; Kwon et al., 2010; Sherman et al., 2000; Sullivan & Kent, 2003). Although the same problem was found in the RLSS in the studies of Zhang et al. (1997) and Jambor and Zhang (1997), the internal consistency of the autocratic behavior was sound in the present study. The Cronbach's alpha values were .90 and .94 respectively for the perceived and preferred versions. Although Zhang et al. (1997, p. 117) indicated that "the study was conducted in the United States and the regulations of the National Collegiate Athletic Association were considered, thus, the scale is more culturally specific to the United States," the items in the autocratic behavior turned out to be more internally consistent among Singaporean elite athletes. Nevertheless, further empirical evidence is needed to explore this difference between American and Singaporean collegiate athletes.

Although the internal consistency of the autocratic behavior was satisfactory, the results of the current study witnessed another psychometric concern that needs to be noted for the future use of the RLSS. As indicated in the results section, the six dimensions of the RLSS demonstrated a construct validity problem to a certain extent in the analyzed sample. Although the reliability of the six dimensions was quite acceptable, many items' factor loadings were found to be below .707. Particularly, item 7 of social support in the preference version (i.e., I prefer my coach to visit with the parents/guardians of the athletes) showed a factor loading of .48, indicating that only about 23% of the variance was common variance. During the preliminary

examinations, however, this item was removed from the perceived version due to its low item-to-total correlation.

Out of the 59 and 60 total items in the perceived and preferred version, respectively, 14 items in the perception version and 16 items in the preference version demonstrated convergent validity problems. Thus, the RLSS needs to be re-examined for its psychometric properties with confirmatory factor analyses using different populations in a future study. For example, the behavior that coaches visit with parents of athletes is not culturally specific to Singapore. Particularly, this behavior is a very rare case in college sports as student-athletes in colleges are considered independent and mature enough to be responsible for their actions or trainings.

In addition to the convergent validity problem, the situation consideration sub-dimension was found lack discriminant validity when it was related to teaching and instruction. This problem was found in the perception version as well as the preference version of RLSS. It can be explained by the semantic similarities with the items in teaching and instruction and situation consideration. Many of the items in situation consideration are related to coaching in specific situations (e.g., coaching to the level of the athletes, increasing complexity and demands if the athletes find the demands are too easy). Thus, although teaching and instruction behavior can be conceptually differentiated from situation consideration, the statistical results were not discriminated enough. The sub-dimension of situational consideration was added on top of the five sub-dimensions of LSS based on the argument that the original LSS did not incorporate general contingent leadership theories (Zhang et al., 1997). Contingent leadership theories include diverse situational factors that can alter the leadership style such as leader-member relation, task structure, and positional power (Fiedler, 1967). Hersey and Blanchard (1982) indicated leaders are categorized into four behaviors (i.e., telling, selling, participating, and

delegating) based on task behavior and relationship behavior. As noted in the two aforementioned contingent leadership theories, a human relationship between the leader and member is a critical element that should be considered in choosing a proper leadership style. However, the items in situational consideration have too much focus on task behavior, which, in turn, resulted in lack of discriminant validity with teaching and instruction. Thus, several items in situational consideration need to be replaced with new items that can capture the human relationship between leaders and members such as understanding the needs of an athlete in a specific situation. This adjustment will enhance the conceptual fit of situational consideration to the tenet of contingent leadership and, at the same time, improve its discriminant validity with teaching and instruction. Rather than assessing satisfaction with leadership as a single construct,

In addition, future studies may incorporate satisfaction with specific dimensions of leadership. The current study assessed satisfaction with leadership as a single construct. This precluded us from investigating athletes' satisfaction in each dimension of leadership behavior. According to Schliesman (1987), the results for general satisfaction differed from satisfaction with a specific dimension of leader behavior. For instance, Riemer and Chelladurai (1998) developed the Athlete Satisfaction Questionnaire (ASQ) including 15 dimensions. Among them, the four facets of athlete satisfaction (i.e., ability utilization, strategy, training and instruction, and personal treatment) conceptually and practically capture the process of leadership (Riemer & Chelladurai, 1998). By incorporating such satisfaction measures in each leadership behavior, a future study can better pinpoint athletes' reaction to different coaching behaviors. Using this information, coaches can determine which behavioral dimensions they need to focus on to improve congruency between athletes' perception and preference.

Lastly, a future study can recruit athletes from various sports, particularly, individual sports to improve the external validity of the study. The majority of athletes involved in this study were participating in team sports. The significant influence of congruence in social support on athlete satisfaction may be related to the nature of the sports involved. Beam, Serwatka, and Wilson (2004) noted that differences between the demands of athletes in individual sports (e.g., badminton and track and field) as compared to team sports (e.g., netball and soccer) could influence the effects of coaching preferences and perceptions on their satisfaction level. One Singaporean study comparing perceived leadership behaviors between individual and team sports found that team athletes showed significantly higher perceptions only on social support than its counterparts (Pyun, Kwon, Koh, & Wang, 2000). Therefore, the congruence in social support might have stemmed from the reason that most participants were drawn from team sports. Including more diverse samples in future studies can not only improve the external validity of the results but also provide insights on the differences between individual and team sports.

### Conclusions

An understanding of the congruence between athletes' perceived and preferred leadership behavior and its impact on their satisfaction is important to practitioners. Athletes serve as important sources of information to assess coaching effectiveness. Thus, it is essential that a coach works closely with his or her athletes to obtain a better understanding of their preferences and needs to tailor coaching behavior resulting in enhanced athlete satisfaction.

Taken together, the findings from this study suggest that, when matched to athlete preferences, socially supportive behavior of coaches can enhance athletes' satisfaction levels. Providing care and concern for their athletes via interpersonal relationships turns out to be beneficial in facilitating a more positive and satisfying sporting experience. Consequently, sport

administrators should thus be mindful of the impact a coach's leadership behavior has on the level of satisfaction, and potentially in turn, performance of the athletes when they are recruiting sport coaches. Therefore, the findings from this study have direct implications on the standards of the collegiate coaching in Singapore, and also help in moving the nation closer to its goal of "building a flourishing sports ecosystem" (Ministry of Community Development, Youth and Sport, 2008, p. 8).

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Table 1

*Descriptive Statistics of the Perceived and Preferred Versions of the RLSS and Satisfaction*

Dimension	Item #	Perceived version				Preferred version			
		Skewness	Kurtosis	Mean (SD)	$\alpha$	Skewness	Kurtosis	Mean (SD)	$\alpha$
Teaching & instruction	10	-1.56 ~ -0.65	0.49~ 3.88	4.02 (0.64)	.93	-1.15 ~ -0.20	-0.67 ~ 3.40	4.34 (0.47)	.90
Democratic behavior	12	-0.77 ~ -0.27	-0.37 ~ 0.74	3.58 (0.71)	.94	-0.85 ~ -0.33	-0.37 ~ 1.05	3.88 (0.61)	.93
Autocratic behavior	8	-0.13 ~ 1.22	-0.86 ~ 1.73	2.21 (0.72)	.90	0.21 ~ 1.33	-1.00 ~ 1.63	1.93 (0.81)	.94
Social support	8	-0.67 ~ 0.72	-0.60 ~ 0.78	3.43 (0.72)	.88	-0.65 ~ 0.21	-0.77 ~ 0.29	3.59 (0.75)	.91
Positive feedback	12	-1.13 ~ -0.69	-0.09 ~ 2.09	3.95 (0.66)	.94	-1.29 ~ -0.28	-0.82 ~ 3.36	3.92 (0.50)	.93
Situation consideration	10	-1.07 ~ -0.69	0.78 ~ 2.31	3.96 (0.66)	.94	-0.88 ~ -0.25	-0.65 ~ 2.07	4.31 (0.53)	.95
Satisfaction	7	-1.65 ~ -1.22	2.17 ~ 3.33	5.79 (1.06)	.96				

Table 2

*Factor Loadings and R<sup>2</sup> of Observed Variables in the RLSS Measurement Models*

Dimension	Perceived version <sup>a</sup>			Preferred version		
	Loading	AVE	Goodness of model fit	Loading	AVE	Goodness of model fit
Teaching & instruction	.68 ~ .80	.57		.60 ~ .77	.49	
Democratic behavior	.59 ~ .84	.56	$\chi^2(1524) = 2720.09$ $\chi^2/df = 1.78$ RMSEA = .07 SRMR = .07 CFI = .97 NFI = .94	.52 ~ .81	.52	$\chi^2(1580) = 3472.01$ $\chi^2/df = 2.20$ RMSEA = .09 SRMR = .08 CFI = .95 NFI = .91
Autocratic behavior	.63 ~ .83	.53		.63 ~ .93	.68	
Social support	.60 ~ .85	.56		.48 ~ .87	.58	
Positive feedback	.66 ~ .87	.57		.62 ~ .89	.55	
Situation consideration	.75 ~ .85	.62		.73 ~ .87	.65	

<sup>a</sup>One item in the perceived social support (SS7) was removed from the item pool due to its low item-to-total correlation.

Table 3

*Leadership Congruence and Satisfaction*

	Initial order			Reverse order			<i>F</i>
	Variable	<i>R</i> <sup>2</sup>	$\Delta R^2$	Variable	<i>R</i> <sup>2</sup>	$\Delta R^2$	
Teaching & Instruction	Preference	.004	.004	Perception	.377***	.377***	37.74***
	Perception	.385***	.381***	Preference	.385	.008	
	Interaction	.385	.000	Interaction	.385	.000	
Democratic	Preference	.015	.015	Perception	.194***	.194***	16.58***
	Perception	.195***	.180***	Preference	.195	.001	
	Interaction	.216*	.021*	Interaction	.216*	.021*	
Autocratic	Preference	.022	.022*	Perception	.191***	.191***	16.60***
	Perception	.212***	.190***	Preference	.212	.021*	
	Interaction	.216	.004	Interaction	.216	.004	
<b>Social Support</b>	Preference	.053	.053***	Perception	.276***	.276***	<b>27.80***</b>
	Perception	.278***	.224***	Preference	.278	.002	
	<b>Interaction</b>	<b>.315***</b>	<b>.038***</b>	<b>Interaction</b>	<b>.315***</b>	<b>.038***</b>	
Positive Feedback	Preference	.008*	.008	Perception	.295***	.295***	30.18***
	Perception	.320***	.311***	Preference	.320*	.025*	
	Interaction	.333	.014	Interaction	.333	.014	
Situation	Preference	.022*	.022*	Perception	.375***	.375***	38.94***
	Perception	.382***	.359***	Preference	.382	.007	
	Interaction	.392	.010	Interaction	.392	.010	

\**p* < .05; \*\**p* < .01; \*\*\**p* < .004